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ENLARGING THE AMERICAN ELEMENTARY SCHOOL

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A short preface will serve to indicate the origin and purpose of this article. Its authors have from time to time found themselves in disagreement with regard to the junior high school. Deliberate consideration of the points of disagreement convinced them that there are certain fundamental educational principles involved in the organization of the seventh, eighth, and ninth grades to which they can both unreservedly subscribe. They have thought it desirable that a joint statement of such fundamentals be drawn up. The following article is the result. They are prepared to share alike responsibility for every statement in this article.

There can be no doubt in the mind of any careful student of education that there are important changes going forward in the seventh, eighth, and ninth grades. These changes are related in many ways to the fact that much greater numbers of pupils than ever before in our school history are passing through these grades. The time was, before the studies in retardation, when the number of pupils who reached the eighth grade was comparatively small, and the entering class in the high school contained so small a percentage of the pupils who entered the eighth grade that the matter

of the transition was a much less urgent matter than it is today. Now school officers are making every effort to carry pupils forward as far and as fast as possible, and the course of study and the organization of the grades are being worked over with a view to keeping pupils in school. The efforts of teachers and principals are being reinforced by social agencies outside the schools. The improvement in the economic condition of the people in this country has increased the ambition of families that their children should go to school beyond the elementary grades and has made it possible for children to prolong the period of their schooling.

It is needless to review in this connection the enlargements of the high school which recent years have witnessed. The facts are well known and too impressive to be forgotten. From the high school downward as well as from the elementary school upward there has been a reaching across the gulf which in former days was set between the eighth grade and the ninth grade. And it is well for American education that this should be so.

The improvement in relations between the eighth and ninth grades has served to emphasize the importance of the fact that our school system is in theory and is coming to be in practice a continuous opportunity for every pupil. Any movement which makes for ease of transition from one grade to another should be applauded. Any agency which sets up a barrier to divide one grade from another is to be condemned without reserve.

The first principle, then, which we reach in our consideration is the principle that all organization within the schools should be judged as appropriate to the American system of education just in the degree in which it makes for continuous and uninterrupted opportunity for every pupil.

The second general principle is closely related to the first. Within each school unit there has been and is appearing in still larger measure an enrichment of the course of study and of the opportunity offered to the pupil. This tendency shows itself in many different ways. The school year in American schools has been lengthened. The teachers are better trained each succeeding year. There is a better and broader collection of textbook material; school buildings are better; maps and apparatus for demonstration

are better and more common. This internal development of all aspects of school operation is in keeping with the increasing regard for an education which appears in the business world, in public life, and in the ambitions of individual pupils.

That this enlargement of the educational program should affect especially the upper grades of the elementary school and the first year of the high school is by no means surprising. It is just at this point in the school that the pupil, made acquainted with the fundamental tools of experience in the lower grades, finds himself entering productively into the enjoyment of his achievements. Because he has learned to read fluently the child in the seventh grade has before him the rich world of history and geography and elementary science. He can grasp with more assurance the principles of mathematics and can use with greater nicety the words and forms of the vernacular. The period of varied and enlarged education has come and the course of study must be enriched.

No less is it true that the first year of the high school must undergo an enlargement. Formerly it was the narrow portal to an exclusive course open to the few. Today the ninth grade is part of a broad cosmopolitan scheme of education. There is no disposition as in days gone by to limit the student's opportunity to a few required subjects.

Enrichments of the course of study are by no means confined to the grades here under discussion, but the lower grades of the elementary school from the nature of the case must always concern themselves chiefly with a comparatively narrow range of rudimentary subjects. The upper grades become broader because they permit the pupil to pass out of the rudimentary stages of his education. Nor should the fact be overlooked in this connection that the enrichment of a course of study often consists in that internal reorganization which frees instruction from unproductive by-paths. History can be enriched by taking out worthless formal material. Arithmetic and geography must be purged of the waste which is now all too common. This internal readjustment is quite as important as importation into the course of new material.

Especially is it true that the work of each grade should be modified so as to eliminate useless repetitions. Reviews are important

and should not be neglected, but the upper grades of the elementary school have sometimes been the scenes of unjustifiable waste of the time and energy of the pupils because the conscientious teacher has dragged the bored and sated children through review after review. Just because the eighth grade has been looked on as a kind of terminus, these reviews have doubtless tended to accumulate here. If we learn to think of the educational program as continuous, the reviews may be more equitably and economically distributed.

Of large importance in this connection is the character of the work in the so-called intermediate grades, especially the fourth, fifth, and sixth. Upon the efficiency of the work done here will depend in large measure the success of any attempt to reorganize the upper grades. Hand in hand with the development of a new point of view for the seventh and eighth grades should go a concerted and intelligent effort (1) to insure better teaching and a more mature and permanent body of teachers for the middle grades, and (2) to formulate principles that shall serve to govern the instruction and training of children between eight and twelve, at least as satisfactorily as analogous principles are now governing the work of the primary grades and the work that has to do with the adolescent period.

The enriched program must have one characteristic above all others. It must be appropriate to a democracy. Here we come to a point in the discussion where it is easy to fall into disagreements. The world is still experimenting with democracy. We are striving to develop a democracy in our other social institutions, as, for example, in our industries. How difficult it is to reach a generally acceptable definition of democracy appears if we study industries and industrial legislation and note the many shades of divergent opinion and conflicting practices.

Out of the uncertainties which surround this part of our discussion we may expect fairly universal assent to three general statements. First, the future must see greater emphasis than has the past on studies of community life and community needs. And the term "community" must not be narrowly defined. The course of study must be enriched to include intensive study of our nation and its meaning to our citizenship and to the world. Secondly, the

future must see the enriched course providing a broad, sure foundation for the practical life of the individual. Again, there must be no narrow limitation of the individual, no training for a single type of life. This is not a plea for narrow trade training; it is rather an assertion that there must be a vigorous effort toward the development of a comprehensive view of industry, so that the individual may choose his career after a broad view of democratic opportunity. Thirdly, the enrichment of the course must aim consciously at the destruction of those provincialisms and class prejudices which have worked in the history of nations in the past, counter to the interests of democracy. Ignorance of other tasks than one's own breeds lack of sympathy and results in the separation of group from group. Intelligence regarding others brings with it sympathy and co-operation.

Each of the three points outlined in the last paragraph invites one to compose a chapter on educational possibilities. This is not the appropriate place for a full discussion of these matters. In order to avoid ambiguity two negative statements must be made.

First, a course of study is not broad or enriched in the sense in which the term "enrichment" is used in this article if it is a limited course preparing for a trade. Nor is the fact lost to view that there is a legitimate demand in the experiences of many boys and girls for a trade training. It is, however, contended, with unlimited emphasis on the needs of a democracy, that whenever trade training is given it should be accompanied just as far as possible by broadening, sympathy-cultivating instruction. To give early a limited occupational training will tend (1) to set up class distinctions, and (2) to deprive large numbers of children of the broad basis of general and liberal training, which is essential to successful democracy. Every effort to reorganize the work of the upper grades should start from the fundamental principle that effective democracy implies the highest possible level of trained and informed intelligence in all of the members of the democratic group.

Secondly, there are certain forms of enlargement of the course of study which defeat rather than promote the ends of education. Thus if more subjects are introduced into the course than can be

assimilated by the pupils there will follow a distraction which will be quite as disastrous as any limitation that could be put on the course. Pupils will fail to learn the lesson of concentration of attention; thoroughness and mastery will have no meaning for them; they will carry away a confused general idea of the materials they study, and they will fall into a type of superficial thinking which is one of the perils of the modern course of study.

Not only so, but there is danger in the enlargement of the course of study that subjects will be introduced which are in form far beyond the maturity of the pupils. The old-fashioned course of study undoubtedly made the mistake of assuming too little capacity on the part of pupils. The new and more ambitious programs are sometimes reckless in the introduction of advanced courses. If, for example, algebra and geometry are to be brought down into the elementary grades they must be modified in their content and in their mode of presentation as compared with the same subjects when taught in the high school. There is no surer way to fail in the seventh and eighth grades than to carry back without change a high-school course in algebra and attempt to administer it in a formal way to immature pupils. These examples should serve as warnings against an irrational and ill-considered enlargement of the course of study.

We may turn now to another general principle of education which has been subject to a variety of interpretations in the course of the reorganization of the seventh, eighth, and ninth grades. It is the principle of individual differences. If there is one lesson which has been clearly taught by all of the recent investigations in education, it is the lesson that there are wide differences among pupils with respect to tastes, abilities, and capacities for progress, and that these must be heeded in the preparation of the school program. We are confronted here by a difficult problem. It is the business of a democratic school to see to it that the materials of thought which are presented to children shall contain enough common elements so that the thinking of the community as a whole shall be guided along similar lines. A school which gives to one class of children one set of ideas and ideals and to another class an entirely different set of ideas and ideals will make for social dis-

tinctions that are dangerous in a democracy. On the other hand, a course of study which knows no variations and makes no adaptations of its content to individuals of different capacities and different interests is quite as dangerous in a democracy as the stratifying course. Individual differences appear in the economic life of a democracy and play an important rôle in providing the community with workers of different types. There is the mature man who is interested in engineering problems. On the other hand there is the man of literary type wholly unadapted to the practical problems of engineering but capable of making a contribution to the welfare of the community by his attention to letters. In the same way in the trades there is the man who has mechanical interests. On the other hand there is the carpenter who is more interested in the use of hand tools and in the problems of construction.

Differentiation of occupations is an important outgrowth of our present economic system, and no definition of democracy can overlook the principle of division of occupations and diversity of interests. Our schools no less than our factories must recognize the fact that the child as he matures differs increasingly from his neighbor. How soon the school should recognize this fact and begin to offer diversified opportunities to the children has been an unsolved problem in our educational system. Heretofore we have adopted the practice of introducing high-school students suddenly to large opportunities of election. Even this practice is of relatively recent origin, but during the last decade a very wide latitude has been recognized as desirable in high-school curricula. The elementary school, on the other hand, has been very slow in adopting the principle of differentiation and has introduced it in most systems only in the upper grades. If the elementary course is so safeguarded that its content of instruction shall give to all children some common central body of ideas, differentiation must be introduced cautiously and with full regard to the requirement that universal instruction be given in fundamentals. It is not incompatible with this demand that individual differences be recognized to some extent from the very outset of school life, although the general principle of individual differences begins to assert itself as an important basis of educational organization in the middle grades.

of the school. There ought to be a differentiation of such a sort that those pupils who can go forward rapidly shall have their capacity for more work recognized and those who mature somewhat more slowly and are able to progress only at a slower rate shall be given the type of instruction which is adapted to their particular capacities. Such a difference in rate of movement will inevitably have an effect upon the amount of material which pupils of different grades of ability can absorb. The faster pupils will cover a wider range of experiences, and it is to be expected that the education which results from this widening of the range of experience will mature into differences of taste and preparation for later work that are of major importance. There is no more urgent problem at the present time in the organization of the elementary-school course than the discrimination between those essential types of instruction which should be given to all children and the additional types of instruction which can properly be offered to children of exceptional capacities.

There can be little doubt that the reading in the sixth grade ought to be affected by this consideration. Children ought to be allowed to read silently passages of their own selection as a part of the regular school work. They ought, indeed, to be encouraged to take up material which will carry them beyond the ordinary routine of classroom exercises. The teacher's supervision of the children's reading thus becomes even in the intermediate grades a matter of differentiating the content of instruction.

What is true in reading is also true in the other subjects. The range and kind of historical material which is included in the seventh and eighth grades will differ according to the capacities of the pupils. This does not mean that one child should pursue a course in ancient history and exclude all of the material that belongs in the course in United States history. It means, rather, that all of the children should have training in the fundamentals of the history of their own country, but some children ought to be given an opportunity, because of their natural tastes and capacities, to go beyond the elementary requirement which is imposed upon all students. What is true of history is true also of cooking and of manual training.

The difficulty which arises in the application of this principle of individual differences is to be faced by frankly recognizing the unsolved problem of our new course of study. In the course of the future there must be a common body of material for all children and a body of carefully supervised but differentiated opportunities for children of different tastes and capacities. Anyone who is disposed to divide the course of study of the seventh grade into entirely separate and distinct curricula for different children does violence to the fundamental demands of a democratic organization. On the other hand, anyone who would hold the course of study at any point to rigid and narrow lines does violence to the natural demands which express themselves in the differentiated interests of the pupils.

In speaking of interests it should be recognized that by no means all of these, either in childhood or in maturity, are called forth by economic needs. There has been a tendency in recent educational discussions to assume that boys and girls always find school lessons formal and stupid unless they see clearly how these lessons may be made to bear upon the earning of money. This tendency toward economic determinism in educational theory is most unfortunate. A premature or excessive appeal to occupational and economic motives may easily result in a narrowing of the horizon and a closing of the mind to the broader things of life. Under the older social order the wider vision was essentially a class privilege; it is the task of the schools of a democracy to make this privilege universal. And this demands an abundance of opportunities and stimulations which the older curriculum is too narrow and too inelastic to provide.

The general principles which have been set forth in the foregoing paragraphs are capable in practical organization of many different kinds of application. The authors of this article find it possible to agree even on certain judgments with regard to the practical organizations which can now be observed in the seventh, eighth, and ninth grades. It is a well-known fact that there is at the present time no uniformity in the organization of the so-called junior high school. There is the junior high school which is nothing but a departmentalized union of the seventh and eighth grades.

Its course of study is identical with the course of study which has been in operation for years past. There is, on the other hand, the junior high school which sharply differentiates and divides its students into entirely different social castes. Some of the latter types of schools have laid great stress on commercial or industrial training and have treated the junior high school as the device for introducing into public schools a narrow type of vocational training at an early stage in the life of the pupils. Neither of these extreme types seems to the authors of this article to conform to the principles set forth in earlier paragraphs.

Criticism of the unhappy forms of junior high school organization which have appeared in recent years should be paralleled by criticism of the unmodified seventh, eighth, and ninth grades. The elementary school has long suffered from the poverty of its course of study. There was a time when the sessions of this school extended through only a few months in the year. Then there was some justification for a course of study limited to the rudimentary branches. As the school year has expanded the traditions of purely rudimentary instruction have in some quarters survived. Teachers have been loath to branch out into new and productive lines. They have sometimes been so faithful to the limiting traditions of the earlier school that they have spun out with the most conscientious industry subjects that did not require the time lavishly bestowed on them.

The foregoing statement of an educational creed cannot be closed appropriately in this day of urgent social problems without a word with regard to the opportunity which is here for the making of American schools more truly democratic than they have ever been before. Our school system, with its present meaningless distinction between the elementary and secondary fields, grew out of European traditions. The elementary school especially carries many of the limitations that were imposed on the school designed by an aristocratic society for its common people. The high school has been and still is the school of privilege. Step by step we have been shaking off the restrictions which tradition has imposed on the common school. This article is a plea for a united effort to complete the task of democratizing American elementary education. There

certainly can be no curtailment in such a program. There ought to be nothing but expansion and the elimination of breaks. Our school system should be in every sense a "unit" system. It should reflect at every point the two fundamental and complementary principles of democracy—opportunity and obligation, opportunity for individual development, coupled with and paralleled by the obligation of the individual willingly to learn the lessons that all must learn in common if our democracy is to rest on a real community of ideas and ideals.

JUNIOR HIGH SCHOOLS IN THE NORTH CENTRAL ASSOCIATION TERRITORY, 1917-18

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For the last two or three years it has been the policy of the North Central Association of Colleges and Secondary Schools to make a scientific study of some one or more special problems connected with secondary education in its territory. The present year the topic was "Junior High Schools."

To secure data a questionnaire was sent to each North Central secondary school which was on the accredited list last year, and to such new schools as were thought eligible this year. The questionnaire was made a part of the required report of every school, and since a standard of the Association reads "No school shall be considered [for accrediting] unless the regular annual blank furnished for the purpose shall have been filled out and placed on file with the inspector," it may be fairly assumed that replies were received from all schools having a junior high school organization. Moreover, the questionnaire was so worded as to call for a reply from all schools which had any modified form of the eight-four plan, irrespective of the name given to such modified form.

Last year 1,165 secondary schools were accredited by the Association. Of this number, and including a few new schools, 293 this year made returns on the junior high school or its assumed equivalent. It may be concluded, therefore, that this is, approximately at least, the total number of such schools in the North Central territory today.¹

The table on p. 326 gives the summary of the replies to the questionnaire.

¹ The Montana list is, inadvertently, entirely omitted. Few junior high schools were, however, reported from this state. Ohio has sent in six additional reports since the table was made up.

The following constitute the more significant items and deductions from the table:

Almost precisely one-fourth (25.78 per cent) of the accredited schools of the Association have taken steps intended to develop a six-year high-school system. Of these 293 schools, almost exactly one-fourth (24.57 per cent) have been established within the present school year. The growth toward the junior high school is therefore remarkably rapid just at this hour, and analyses of the replies to the questionnaire seem to indicate that next year it will be even more rapid and complete.

Precisely what constitutes a junior high school (or anything that closely approximates it, in fact) is a difficult question to answer dogmatically. While the replies to the questionnaire indicate that a goodly percentage of the school people have a reasonably clear conception of its purpose and characteristics and have made a positive approach to its realization, yet in numerous instances the modifications of the old-type grammar school are so meager and half-hearted, so purposeless and feeble, that only by the exercise of much charity of spirit and liberality of judgment can they be regarded as having caught even a glimpse of the new movement. Let it be repeated: All depends on definitions. But certainly, to the writer, who scrutinized carefully each set of replies received, there are very far from being 293 complete junior high schools in the Association territory.

With respect to the external organization almost every conceivable arrangement of grades is reported. Of the entire number, 133, or 45.39 per cent, have the seventh and eighth grades only included; 89, or 30.37 per cent, have the seventh, eighth, and ninth grades; 22, or 7.50 per cent, have the sixth, seventh, and eighth grades; 18, or 6.14 per cent, have an undifferentiated six-year high school; 11, or 3.75 per cent, have the eighth grade only included; 8, or 2.73 per cent, have the eighth and ninth grades; and 11, or 3.75 per cent, have some other arrangement different from any of the foregoing groupings.

Again 168, or 57.33 per cent, of the entire number, state that their school is definitely styled the junior high school; 46, or 15.69 per cent, call it the departmental school; 12, or 4.09 per cent, have

JUNIOR HIGH SCHOOLS IN NORTH CENTRAL ASSOCIATION TERRITORY, 1917-18

	Ariz.	Colo.	Ill.	Ind.	Iowa	Kan.	Mich.	Minn.	Mo.	Neb.	N.M.	N.D.	Ohio	Okl.	S.D.	Wis.	Wyo.	Totals	Pct.
1. No. H.S. accredited, 1917*.....	7	37	163	83	79	74	119	86	65	64	8	33	175	21	25	101	6	1,140	1,293=25.78
2. No. J.H.S. reported, 1918*.....	3	9	15	33	16	28	43	32	4	29	8	17	13	3	1	17	3	17	72=24.57
3. No. established, 1917.....	2	4	4	6	7	8	4	2	6	1	2	1	2	1	1	5	1	1	61=20.81
4. No. established, 1916.....	2	2	2	5	4	6	3	6	0	5	1	2	6	3	1	4	1	1	160=54.00
5. No. established before 1916.....	0	1	3	9	22	8	15	27	22	0	15	1	13	10	2	5	8	2	133=45.39
6. No. including grades:.....	1	2	11	16	8	15	18	13	1	4	3	9	14	4	3	1	9	2	89=30.37
a) 7-8-9.....	1	5	3	7	1	9	14	13	3	0	6	8	1	1	0	1	0	1	18=6.14
b) 7-8-9-10-11-12.....	0	1	0	2	1	1	7	1	0	2	0	0	2	0	0	0	0	0	11=3.75
c) 8 only.....	0	0	1	1	0	1	0	0	1	0	1	0	1	0	0	0	0	0	22=7.50
d) 6-7-8.....	0	0	1	6	2	1	2	1	0	0	0	0	1	0	0	0	0	0	8=2.73
e) 8-9.....	0	0	1	0	1	1	2	0	1	0	0	0	1	0	0	0	0	0	11=3.75
f) Others.....	0	0	0	0	0	2	1	0	2	0	4	0	0	0	0	0	0	0	165=57.33
7. No. called J.H.S.	2	7	9	15	5	16	35	20	2	10	9	23	6	5	3	13	2	1	46=15.09
8. No. called Dept. Sch.	0	0	5	12	2	4	3	5	1	4	1	2	2	1	0	0	0	0	12=4.09
9. No. called 6-yr. H.S.	0	0	0	0	1	2	7	1	0	0	0	0	1	0	0	0	0	0	67=22.86
10. No. called other names.....	1	2	1	6	8	6	8	6	1	12	7	3	0	3	2	0	2	0	45=15.35
11. No. having 8-7-6 still.....	1	2	3	4	1	2	5	5	3	1	2	6	3	2	1	3	0	0	138=47.09
12. No. housing J.H.S.	1	2	3	4	1	2	5	5	3	1	2	6	3	2	1	3	0	0	85=19.01
13. No. with S.H.S.	1	5	6	16	6	11	24	16	0	9	1	7	17	5	4	8	2	0	49=12.72
a) With El. Sch.	0	6	3	11	7	8	10	5	10	1	12	1	7	6	0	1	6	1	105=35.83
b) Separately.....	0	5	8	1	7	6	4	5	2	1	1	2	1	2	1	0	1	0	144=48.80
c) Separately in building.....	0	5	4	8	9	7	15	9	1	9	0	7	11	4	11	5	0	50=19.11	
14. No. principals advocating J.H.S. because it provides:.....	1	4	6	14	3	17	20	14	2	12	1	6	16	3	4	3	8	70=25.93	
a) For individual needs.....	1	0	7	0	8	11	8	2	2	1	8	1	8	2	3	1	2	1	77=26.27
b) Differentiated curricula.....	1	0	1	6	5	7	15	10	1	8	1	4	10	1	1	1	0	5=18.43	
c) Better teaching.....	1	5	4	4	5	5	7	12	5	3	4	6	1	6	3	1	2	67=22.86	
d) Easier transition to S.H.S.	1	1	3	2	1	0	5	6	12	0	6	1	6	2	1	0	0	108=36.86	
e) Promotion by subject.....	1	1	5	4	1	4	7	9	9	0	6	1	8	4	1	0	0	108=36.86	
f) Dept. organization.....	2	4	7	10	0	10	15	10	1	11	5	4	11	8	2	5	3	108=36.86	
g) Better preparation for life.....	1	5	7	15	5	9	12	14	1	9	1	6	12	1	2	8	0	108=36.86	
h) Admitting retarded or accelerated pupils before completion of previous grade.....	1	142	704	1,616	3,833	1,907	2,312	2,405	2,639	3,066	1,110	3,410	772	2,310	886	364	782	130	21,058
i) Boys.....	151	830	1,971	3,527	7,142	3,084	5,401	7,159	5,154	2,924	434	1,268	930	2,450	1,208	424	720	130	21,710
j) Girls.....	293	1,534	1,534	1,534	1,534	1,534	1,534	1,534	1,534	1,534	1,534	1,534	1,534	1,534	1,534	1,534	1,534	1,534	45,668
15. Teachers, 1917:.....	16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	352
a) Acad. men.....	4	5	13	68	11	32	74	16	12	11	15	8	57	9	3	23	1	352	
b) Acad. women.....	21	59	144	191	85	147	207	151	86	153	133	48	28	74	14	1	1	1	1,592
c) Voc. men.....	3	9	22	47	21	50	53	16	14	14	28	5	8	20	3	3	3	338	
d) Voc. women.....	18	24	60	32	39	88	44	16	21	28	41	8	12	29	4	1	1	478	
e) Total.....	31	91	263	375	140	253	401	204	73	137	239	70	140	279	70	140	23	2,760	

JUNIOR HIGH SCHOOLS

* Many questions on the questionnaires were left wholly unanswered. This fact accounts for the apparent inconsistencies, in certain instances, in the totals and percentages given.

One school reports 20 periods of 30 min. (Neb.); one, 16 periods of 25 min. (Minn.); one, 16 periods of 20 min. (Ill.); two, 16 periods of 20 min. (Ill.).

SPECIAL NOTE.—The entire report of Montana is missing from this table. Last year that state had 25 schools accredited by the Association. It has but a few 12 periods of 25 min. (Neb.); and several, to periods of 30 min. to 35 min.

junior high schools.

JUNIOR HIGH SCHOOLS IN NORTH CENTRAL ASSOCIATION TERRITORY, 1917-18—Continued

	Ariz.	Colo.	Ill.	Ind.	Iowa	Kan.	Mich.	Minn.	Mo.	Neb.	N.M.	N.D.	Ohio	Ola.	S.D.	Wis.	Totals	Pcts.
28. No. schools having same salary schedule for J.H.S. teachers as for S.H.S. teachers also	1	3	5	7	3	5	18	6	0	11	0	5	13	2	5	7	1	92=31.39
29. No. schools in which J.H.S. teachers also teach in S.H.S.	1	4	8	18	6	4	0	17	1	9	1	7	18	0	3	5	1	103=35.15
30. No. schools having J.H.S. principal	1	4	8	26	11	10	17	23	3	19	3	11	11	6	4	9	1	116=60.66
31. No. schools having supervision by:	1	2	7	1	1	6	12	16	1	10	0	5	8	1	3	5	0	79=26.66
a) Super. only																		107=56.99
b) J.H.S. principal																		72=24.57
c) S.H.S. principal																		19=6.48
d) Others																		103=65.87
32. No. schools having principles of discipline	1	3	5	5	4	5	11	19	17	17	3	19	3	11	6	3	0	102=34.81
33. No. schools having principles of discipline freer than in El Sch.	3	7	12	25	9	1	34	21	2	19	2	9	21	5	7	13	3	105=44.36
34. No. schools having principles of discipline less free than in S.H.S. definitely outlined, curricul.	2	5	8	16	8	16	20	14	2	17	3	6	14	5	6	4	2	148=59.51
35. No. schools allowing election by curriculum	1	3	5	5	6	4	12	15	2	10	2	6	13	6	2	7	1	74=25.23
36. No. schools allowing election by subject	3	3	7	15	5	5	18	26	15	2	12	1	11	5	2	5	1	143=48.46
37. No. schools providing for pupils:																		106=55.97
a) With short school career																		153=52.31
b) Who are sickly																		159=47.44
c) Who are inept at book study																		131=44.70
d) Who can give but part time to school																		105=36.55
38. No. principals believing J.H.S.:																		105=36.55
a) Keeps more pupils in school	1	4	13	25	11	24	37	20	3	14	3	14	17	8	6	8	3	105=36.55
b) Produces better citizenship	0	5	12	25	13	14	29	30	4	17	3	11	17	2	6	6	3	105=36.55
c) Produces better scholarship	0	4	10	28	9	17	28	17	3	19	2	11	14	6	5	3	1	105=36.55
d) Produces better socially equipped pupils	1	4	10	26	12	20	36	16	2	19	5	13	18	7	2	3	1	105=36.55
e) Produces better moral and social school conditions	0	6	11	21	26	18	3	12	3	12	3	17	5	6	7	2	1	105=36.55
f) Produces better-pleased parents	0	8	12	29	14	24	31	23	3	19	3	15	21	6	10	2	1	105=36.55
g) Produces better-pleased teachers	2	7	12	20	14	23	31	24	3	21	3	15	21	8	5	13	3	105=36.55
h) Produces better-pleased administrators	2	8	14	29	14	23	31	23	4	19	3	15	19	6	12	3	1	105=36.55
No. principals believing J.H.S. positively advantageous	1	6	11	26	9	19	36	17	3	14	2	14	14	8	7	9	3	105=36.55

no special name, but designate the entire six grades as the high school or the six-year high school; and 67, or 22.86 per cent, have still other names employed. Among these are intermediate school, grammar school, junior school, and quite often names in honor of some local celebrity, as the "John Smith School."

Here once more both the external and the internal evidences are strong that, almost in scores of cases, the alleged reformed-school plan has consisted primarily of an altered name. Possibly the departmental organization of subject-matter and teaching, possibly promotion by subject, and possibly one or two other desirable, but inconspicuous and not vital, changes have been made, but there is little to show that such schools have modified the purposes, the program of studies, the spirit, the methods, or the internal administration of the older type of school. In particular did these impressions strike deep in considering the reports of a large percentage of the schools in which the seventh and eighth grades or the sixth, seventh, and eighth grades were alone included in the "reformed" school. The same is likewise notably true in the cases of the 67 schools listed in the table as "Others." It seems a conservative statement to make, therefore, that for fully a third or more of these 293 schools it is yet a long way to a true junior high school.

In the manner of housing, the reformed school only 49 cities, or 16.72 per cent, claim to have for it a separate and distinct building apart from all other grades. Of the others, 138, or 47.09 per cent, say that the junior high school (or the school of the modified form under whatever name) is housed with the senior high school, while 85, or 29.01 per cent, state that it is housed with the elementary school. Of the schools thus housed, 105, or 35.83 per cent, are grouped in segregated portions of the common building. Here again, however, it is not safe to conclude that all these have the form or the spirit of a segregated or separated school. Evidence is too clear in many instances that "segregation" means no more than has always been meant when classes or grades have had "home rooms" and "home teachers." Perhaps, however, here is our safest lead in judging of the number of schools that really provided secondary-school training that is of a longer duration

than four years—that is, that approach closest to the theoretical junior high school idea. This line of reasoning would give 187 (138 housed with the senior high school plus 49 housed in separate buildings), with possibly 21 other schools not here reported in any manner. That is, the total number of fairly recognizable junior high schools is, on this basis, 208.

Wherever the junior high school is in operation the older type of the eight-four plan has, according to the replies received, gone out of existence except in the cases of 45 towns. There is some evidence leading to the belief, however, that the question calling for a reply on this practice was, in several instances, slightly misunderstood.

In the statement of reasons why the reformed-school plan has been established, the persons filling out the questionnaire gave many differing answers. Gathered together, however, under fairly delimited headings, these replies may be classified thus: (1) In order better to provide for individual needs, 143 votes, or 48.80 per cent of the number of schools reporting; (2) in order to provide differentiated curricula, 56 votes, or 19.11 per cent of all schools; (3) in order to provide better teaching, 76 votes, or 25.93 per cent of all schools; (4) in order to make easier the transition to the specialized high school, 77 votes, or 26.27 per cent of all schools; (5) in order to provide promotion by subject, 54 votes, or 18.43 per cent of all schools; (6) in order to provide departmental teaching, 67 votes, or 22.86 per cent of all schools; and (7) in order to help pupils, by means of vocational guidance and otherwise, to prepare for life's problems more adequately and effectively, 108 votes, or 36.86 per cent of all schools.

The North Central Association has, for some time in the past, recommended making the junior high school serve any and all classes of pupils who could profit by its work, irrespective of what the earlier systematic education of the individual has been. That is, the Association has approved the principle of "skipping grades," if conditions seem to make such a procedure desirable for the individual pupil concerned. In practice today, it is to be observed, 108 school systems, or 36.86 per cent of the entire 293 which made reports, do admit pupils to the junior high school privileges before

completing the previous grade. In other words, these schools base promotion on physical development and chronological age, as well as on intellectual attainments of a fixed conventional type.

According to the figures given, there are at present enrolled in the 293 schools included in our study 21,658 boys and 27,710 girls—a total enrolment of 48,368. Instructing these pupils there are 2,760 teachers—352 men teaching academic subjects and 338 teaching vocational subjects, and 1,592 women teaching academic subjects and 478 teaching vocational subjects.

In the length of the school day and the length of the class-periods within the day there is much diversity of practice—the range extending from 20 periods and 20 minutes to 5 periods and 70 or 80 minutes. However, the seven-, eight-, nine-, or ten-period day is the most common—23.54 per cent having seven periods, 26.27 per cent, eight periods, and 26.27 per cent having more than eight periods—and the class-period of from 30 minutes to 45 minutes is the most usual—166 schools, or 56.65 per cent, employing this unit. Nevertheless 58 schools, or 19.79 per cent, have class-periods of 46 to 60 minutes, while 16 schools, or 5.46 per cent, have class-periods exceeding 60 minutes in length.

Provision for supervised study, or showing pupils how to study, is almost an educational fetish of the age, particularly so in connection with the elementary schools and junior high schools. It was difficult, from the replies received on this topic, to sift out the spurious from the genuine. Nearly every school has study-rooms or study-periods presided over by teachers who, incidentally and on solicitation by the pupils, are expected to render assistance in studying lessons. Much of the so-called supervised study reported is, too obviously to be mistaken, of that type only. After eliminating all cases of doubtful character and including none but those that definitely set aside a portion of each class-period for study under supervision, or else definitely provide study coaches in session-rooms, the reports show that 173 schools, or 59.04 per cent, do today have supervised study which, at least in form and plan, seems to be truly worthy of the name.

Of the schools reporting, 153, or 52.21 per cent, assert that they allow pupils some choice of subject-matter or of curricula—48.46

per cent providing for election by subjects and 25.25 per cent by curricula. In the remaining schools there is, confessedly, no pupil choice whatever. The replies to this particular query, however, were not very satisfactory, there being much evidence that the terminology was not clearly understood. "Course," "curriculum," and "subject" were often regarded as synonymous words. All doubtful cases have, in consequence, been excluded from the computations here given, so that with the 102 schools, or 34.81 per cent, which state that they have definitely outlined curricula, the figures must represent approximately the facts.

Most schools seem to recognize that promotion by subject and departmental organization of the work are essential elements in the junior high school movement, for 241 schools, or 82.25 per cent, have the first, and 285 schools, or 97.26 per cent, have the second of these ideals in practice. That provision for vocational guidance, or, to use a better term, life-guidance, is likewise an important element in any fully operating junior high school is attested by the fact that 136 schools, or 46.41 per cent, make systematic use of the plan.

If one purpose of the new organization of the school is to "bridge the gap" between the eighth and ninth or upper grades and thus prevent large numbers of pupils from being eliminated, the question is pertinently asked: Should graduation exercises of any sort be held at the end of the elementary or junior high school period? Does not the practice tend to suggest that a stopping-place has been reached? At least 213 of the schools considered in this study think so, as but 80, or 27.30 per cent, of the entire number hold graduation exercises of that kind.

If the essence of a complete junior high school is, as some believe, to be found in a modified program of studies, then the extent to which subjects not heretofore found in the elementary schools are at present included in the grades *below* the ninth constitutes one important test of a reformed school. The questionnaire did not seek to discover how much of the old material of the seventh and eighth grades had been abolished, or even shorn mightily of its pristine glory, but it did seek to learn which of the subjects heretofore regarded as the just prepossession of the four upper years

of the high school and which subjects that are relatively new to all grades of the public schools have been incorporated into the programs of study for the grades *below* the ninth. The figures show the following: Latin is found *below the ninth grade* in 81 schools, or 27.64 per cent of the total number; modern foreign language in 80, or 27.30 per cent; algebra in 71, or 24.23 per cent; general science in 89, or 30.37 per cent; manual training in 260, or 88.73 per cent; domestic science and art in 259, or 88.39 per cent; drawing in 221, or 75.42 per cent; music in 210, or 71.67 per cent; agriculture in 76, or 25.93 per cent; ancient history (sometimes in the form of biographical stories) in 11, or 3.75 per cent; general history of modern Europe, or European background of American history, in 19, or 6.48 per cent; commercial work in its varied forms (but rarely more than one or two phases in the same school and these usually bookkeeping or typewriting) in 49, or 16.72 per cent; printing in 24, or 8.19 per cent; and distinctive trade instruction in 15, or 5.11 per cent. In other words, manual training, domestic science and art, drawing, and music are thoroughly established in the curricula of the junior high school, being found in approximately three-fourths of the schools. Commercial work and agriculture have also each won fair recognition. General science is rapidly advancing in favor. All of which seems to indicate that the junior high schools are taking rational account of the motor-minded individuals and the individuals who have been retarded in their intellectual development. For the most part, though, wherever manual training, domestic science and art, and drawing are offered they are prescribed for all pupils, indicating that these subjects are designed, not for the motor-minded only, but as essential parts in the common elements of an education in a democracy. All these subjects except music and drawing are (with rare exceptions) scheduled for five class-periods per week—in some schools double periods.

Music, unfortunately, is as yet not regarded very seriously anywhere. Although the questionnaire sought only to bring out the facts respecting music *other than chorus drill*, the reports show clearly that few, if any, such courses in music exist in the schools here considered. Two periods per week devoted to the subject

constitute the common practice throughout the entire territory, and, as implied, little of this time apparently is given to other phases than chorus work. If the Association believes with Plato and Shakespeare and the bards of all times that music has wonderful educative, socializing powers, the question arises whether it ought not to exert a more positive influence in getting it incorporated in the schools in a more effective manner than it has been hitherto!

Of the subjects formerly confined to the grades above the eighth, it is noticeable that transposition of position has, to a considerable degree, taken place with respect to algebra and foreign languages. In no report was there any positive evidence that algebra was part of a combined course in general mathematics, though doubtless such is the case in a very few instances. Of the modern foreign languages German, French, and Spanish each has its supporters, but no one of these languages has a decided lead in popular favor.

In recording school credits, 202 schools, or 68.94 per cent, adhere to the elementary-school practice of doing so by *subjects*; 62, or 21.16 per cent, employ the more usual high-school practice of recording by *units*; and 19, or 6.48 per cent, use the still more uncommon scheme, adopted from the colleges and universities, of recording by *hours*. Here again the practices throw considerable light on the true character and spirit of the schools.

Eighty-eight, or 30.03 per cent, of the schools state that they have the same qualifications for junior high school teachers as for senior high school teachers; 92, or 31.39 per cent, have the same salary schedules operating for both groups; and 103, or 35.15 per cent, have junior high school teachers teaching some classes in the senior high school.

Perhaps as good a criterion as the study gives of the independent status of the junior high school is that evidenced by the degree of universality of the provision for a junior high school principal. Of the schools reporting, 176, or 60.06 per cent, assert that they have such an official. Nevertheless, in the matter of responsible supervision of the junior high schools, 79, or 26.96 per cent, place the power solely in the hands of the superintendent; 167, or 56.99 per cent, give it to the junior high school principal; 72, or 24.57 per

cent, subsume it under the duties of the senior high school principal; and 19, or 6.48 per cent, distribute it elsewhere.

With respect to the principles of discipline used, 193 schools, or 65.87 per cent, maintain that they are freer than those employed in the elementary schools, while 148 schools, or 50.51 per cent, assert they are less free than the principles used in the senior high schools.

According to generally accepted educational theory, the junior high school has been developed largely because it lends itself better than does the older type of school to the multiple needs of many classes of pupils heretofore not effectively reached by the schools. The present study seems to indicate that this theory is accepted in practice, for 130 schools, or 44.36 per cent, are making positive provision for the individual who has before him a short educational career and must get from the schools what he can get and get it quickly; 164, or 55.97 per cent, seek to adapt and adjust the school work, where necessary, to the peculiar needs of the sickly pupils; 153, or 62.21 per cent, give especial consideration to the youths who are inapt at book study and who do better work with more concrete or vocational studies; and 139, or 47.44 per cent, make provision for those who can devote but a part of their time to school duties.

Finally, of the 293 schools reporting, it is the expressed belief of 199, or 67.91 per cent of the entire number, that the junior high school is positively advantageous. Specifically, the principals of these schools think so because, say 131, or 44.70 per cent, it keeps more pupils in school; because, say 195, or 66.55 per cent, it tends to produce better scholarship; because, say 180, or 61.43 per cent, it tends to produce better citizens; because, say 204, or 69.62 per cent, it tends to produce better socially equipped pupils; because, say 187, or 63.82 per cent, it tends to produce better moral and social conditions in the schools themselves.

Moreover, judging from the returns sent in, the junior high school is meeting with popular favor wherever it is being established. Principals in 229 schools, or 78.15 per cent of the entire number, report that the parents are better pleased with the new arrangement than with the old; 234, or 79.86 per cent, state that the teachers

are better pleased; and 231, or 78.83 per cent, say that the administrative officers are better pleased. The combined impressions gained from this study certainly make it clear that the pupils also are better pleased.

In general summary, therefore, it may be said that approximately 300 schools in the North Central territory have consciously sought to take steps looking to the modification of the eight-four plan of organization in harmony with the junior high school idea; that possibly 175, or 60 per cent, of these have already incorporated enough of the commonly accepted characteristics of a junior high school to be entitled to bear that name; that another group of 75 (approximately 25 per cent) have made good beginnings, but have advanced only a short distance on the road to reform; and that the remaining 43, or approximately 15 per cent of the whole number, are deceiving themselves with names—are mistaking the husk for the kernel—and have need of much instruction. Again however, as was said at the beginning, all depends on definitions. Perhaps the North Central Association could do no greater service at the present time than to *begin*, cautiously and gradually, the standardization of the junior high school.

HOW TO INTRODUCE SUPERVISED STUDY

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It is quite general to find that those who are interested in the proposal of a new administrative or instructional procedure attempt to introduce the new method in their schools without studying the local conditions and the consequent needful adjustments or modifications that must be made if the new method is to have a fair opportunity to succeed as well as in other surroundings. Successful schemes of school administration and efficient methods of instruction have been evolved by experimentation and frequently by many readjustments. General uniformity in educational procedure is neither altogether feasible nor altogether desirable. The fact that individual differences, social variations, and financial diversity are so common means that education must take into consideration this lack of uniformity, and that its procedure must be adapted to local requirements.

Many school administrators and teachers are now interested in supervised study. With considerable eagerness many of them determine to introduce the supervision of study in a form little different from that which has been found successful elsewhere. The introduction may succeed, in fact, it usually does, but again it may fail, and fail very seriously. Some failures are quite easily overcome, but when an attempt has been made to reorganize school procedure thoroughly and also unsuccessfully a reactionary spirit is likely to be born. Subsequent reforms become increasingly difficult under such conditions.

Supervised study means a comprehensive and deep-going change in school administration and teaching. Here, for example, is a school in which the usual recitation period is devoted to many questions and answers, to hurried and insufficiently explained assignments, to much home work, and to a formal mass teaching that fails to note individual differences. Supervised study will

change such a school drastically. There will be a minimum amount of reciting, assignments will be carefully explained and studied in class, home work will be greatly reduced if not wholly eliminated, and pupils will be taught in smaller groups and according to their individual progress-rate. Such reorganization involves administratively a longer class-period and a longer school day. If now the class-periods and the school day are lengthened, but the old type of recitation and much home work are retained, disaster is certain to occur. Parents and pupils will despise supervised study, for to them it means heavier burdens and even poorer teaching. With the hope that many school men may find the introduction of supervised study worth while, the following suggestions of procedure growing out of considerable experience with the introduction of this method are offered.

1. The first concern of the principal and the teacher should be to study carefully the meaning and the typical methods of supervised study. Stated briefly, this form of school procedure means teaching and training the pupils to study under the direction of the teacher who has the particular subject in charge.
2. The present school organization should be studied in relation to the proposed change. To what extent is the present form of school practice different from supervised study, and in what particular ways will it be necessary to make revisions? Are the teachers ready for the change? Have they conferred about the proposal, and are they willing to make the change? If the teachers are unwilling, it is absolutely useless to attempt the introduction of supervised study. An unwilling teacher forced to use this method can easily make it appear wholly inferior to the displaced method of teaching.
3. It is wise to experiment first with one or two subjects. Inevitable readjustments must be tried. There is a rather delicate technique to be studied and automatized. Local conditions will require modifications perhaps not needed in other schools. If, however, supervised study is introduced generally in the school, much confusion, discouragement, and dissatisfaction are likely to result, especially in a very large high school.
4. The class-period should be lengthened to at least fifty or fifty-five minutes. In many schools double periods are now becom-

ing common. The eighty- and ninety-minute periods are greatly to be preferred where the number of teachers is sufficiently large. The danger in lengthening the class-period lies in retaining the old question-and-answer type of recitation. Under the new plan the teacher is required to perform three tasks: to test knowledge in a daily review, to assign new work and make its meaning clear, and to supervise the pupils while they study the new assignment. The bulk of the period is devoted to studying and not to reciting. In Latin and modern languages the emphasis is, not on the old translation worked out at home, but on the new translation, its general meaning, its allusions, its ideas and ideals, etc. The daily review would consist merely of a re-reading of this translation, worked out the day before in class, and the stressing of a few essential points in grammar or in general meaning. To lengthen the class-period without revising the method of teaching is likely to bring about complaint and poor results in scholarship.

5. The divided period as outlined under paragraph 4 is least confusing at first. It requires less change in the daily schedule than any other type of supervision. It insures supervision by the teacher of the subject that is being studied at the time. In the usual study-hall, where certain teachers are assigned "to keep order," they may be called upon to offer assistance. Such requests and response are not supervised study. Under the best conditions such supervision might be given by teachers having only a general knowledge of the subject. During the divided, or the double period, the teacher has opportunity to supervise the studying of his own pupils. This is sound psychology and correct teaching.

6. The lengthened class-periods will mean a somewhat longer school day. This implies, of course, that the pupil will have less time to devote to studying at home. It is important, therefore, that where provision is made for considerable studying in school there should be a reduction in home-study requirements.

7. The method of procedure will differ in the several subjects. The procedure in studying history, literature, algebra, and Latin is different and requires treatment specifically applicable to their respective fields. It is therefore important that each teacher should study the psychology of his particular subjects. (*Psychology of High-School Subjects*, by C. H. Judd, and *The Psychology*

of the Common Branches, by F. N. Freeman, are valuable in this connection.)

8. Before undertaking the supervision of study in the sense here used the teacher should have clearly in mind the program to be followed during each period. To multiply questions and drill of the usual types obviously spells failure. The teacher must know what questions are all-essential during the daily review. Only the most important can be stressed. The development of the assignment needs very careful preparation. Here the teaching must be so clear and so inspiring that the pupils will understand and want the new work. When the silent study-period begins, it will be necessary for the teacher to go among the pupils, directing those who need further explanations and noting the acumen of each pupil. In this way the pupil's progress can be measured just as well as during the customary recitation period. Teachers frequently ask, "What am I to do during the supervised study-period?" The answer covers the whole field of teaching pupils how to study. A well-organized and comparative study of the literature on this subject will convince the teacher that this is a large order, but not one impossible to fill. Teaching, we are constantly reminded, is far more than pouring in facts. Important as the informational aim is, the view of teaching as direction in learning or studying is larger and nobler.

The best-known books on this subject are the following: Hinsdale, *The Art of Study*; Kramer, *Talks to Students on The Art of Study*; McMurray, *How to Study*; Earhart, *Teaching Children How to Study*; Hall-Quest, *Supervised Study*; Whipple, *How to Study Effectively*; Dearborn, *How to Learn Easily*; Kilson, *How to Use Your Mind*; Wilson, *How to Train Pupils to Study*.

Generally speaking, supervised study should be introduced gradually. A careful survey of the local conditions and how they require treatment is essential. As the development of the method proceeds, needful modifications are likely to be required. There is no general method of supervised study. It differs with the school, the subject, the pupil group, and of course with the teacher. It is this flexibility that makes study supervision so easy to introduce where proper safeguards are provided.

PRACTICE EXERCISES IN PHYSICS

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Science teachers would like to know how the actual results their efforts produce compare with their ideals. Whenever examinations or ordinary tests are given, the anticipated attainment usually compares very unfavorably with that expected. Neither teacher nor pupil knows what is the matter, nor can the superintendent or principal assist very much in diagnosing or correcting troubles. The writer of this article—undoubtedly along with many other science teachers—has given this matter considerable thought and some experiment. The results, as far as attained, are presented herewith to others with a request for co-operation in the standardization of a series of tests, first in physics and later in the other sciences.

The writing of a set of examination questions is an easy matter. The primary aim is to afford the pupil an opportunity to write and figure upon a representative group of questions and problems. He *passes* if he displays a 60 (or 75) per cent success as judged by the examiner. The preparation of a test, or series of tests, in the modern sense means, not the setting of an examination, but the statement of a standard of attainment which all normal individuals under instruction should reach with variations in speed and excellence according to natural and cultivated ability.

The point of attack selected for these first tests in physics is the numerical problem in heat. Obviously the simplest work should be tested first, proceeding step by step to the more difficult. A tentative progression in difficulty might be the following, which was, for reasons not here explained, selected by the writer.

1. Thermometers. Transformations. C. to F. and F. to C.
2. Fusion and Vaporization
3. Specific Heat
4. Heat Computations

5. Heat Exchange-Simple Mixtures
6. Heat Exchange-Complex Mixtures
7. Heat and Work
8. Expansion
9. Gas Laws

The first test is as follows:

Test H 1.¹ Thermometers A. Time 3:00 minutes.

1. Change	${}^{\circ}$ centigrade to Fahrenheit.	Answer.....	
2. "	${}^{\circ}$	"	"
3. "	-1°	"	"
4. "	-40°	"	"
5. "	100°	"	"
6. "	40°	"	"
7. "	-41°	"	"
8. "	-10°	"	"
9. "	2000°	"	"
10. "	-273°	"	"
No.....	Attempts.....	Right.....	Wrong.....
Time.....	Attempts.....	Right.....	Wrong.....

This test was given to a class of twenty-four boys who had completed the study of heat about two months before the date of the test, and had just passed an ordinary examination upon it. The tests were purposely deferred until after the examination, so that any satisfactory results on the latter could not be attributed to the tests. Also it was hoped thereby to get some comparisons based on the facts that these boys were studying their first science, having had no general science, physiography, or biology, and had begun the study of physics with heat, having had no mechanics, either preceding or accompanying that subject.

They were entirely unfamiliar with tests or testing, so that it was necessary to give them some explanation of what they were about to do. Without any advance warning that a test was to be given them on heat (the assigned lesson was on sound), they were

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asked by the instructor if they were willing to collect some educational data to be sent to Dr. Judd. They were told that the tests they would be asked to take were entirely new—that they were *rate* tests, just like a hundred-yard dash. The idea was attractive.

TABLE I
TEST H 1. THERMOMETERS A*
(Time allowed: 3:00 minutes)

No. of Pupil	Attempts	Right	Wrong	Time to Finish	Attempts	Right	Wrong
				Min. Sec.			
1.....	4	2	2	11:00	4	2	2
2.....	10	10	0	3:50	10	10	0
3.....	2	2	0	7:15	10	8	2
4.....	3	3	0	10:15	10	7	3
5.....	2	2	0	9:30	10	2	8
6.....	6	0	6	8:05	10	0	10
7.....	7	7	0	7:40	10	10	0
8.....	5	3	2	5:50	10	6	4
9.....	(Absent)						
10.....	4	2	2	6:50	10	2	8
11.....	(Absent)						
12.....	6	3	3	6:50	10	3	7
13.....	6	4	2	6:50	10	4	6
14.....	4	4	0	9:00	10	10	0
15.....	9	9	0	4:15	10	10	0
16.....	3	2	1	8:00	10	6	4
17.....	7	7	0	4:45	10	9	1
18.....	7	6	1	5:30	10	9	1
19.....	(Absent)						
20.....	7	0	7	4:30	10	0	10
21.....	4	4	0	5:50	10	9	1
22.....	9	6	3	3:35	10	7	3
23.....	5	2	3	8:05	10	2	8
24.....	8	8	0	4:40	10	9	1
25.....	5	2	3	6:45	10	2	8
26.....	8	7	1	5:45	10	9	1
27.....	10	6	4	2:20	10	6	4
Total.....	141	101	40	.....	234	142	92
Average....	5.87	4.21	1.66	6:32	9.75	5.92	3.83

*Test H 1 as here given to the class differed from the test printed above in the arrangement of the problems. The order actually used in the test was 1, 5, 2, 6, 9, 3, 8, 4, 7, 10.

"Test H 1. Thermometers A" had been printed on sheets 4×5 inches. Two copies were distributed face downward to each individual. On the back of each he wrote his name and his number (each boy in the class has a number by which his position in the laboratory, apparatus, etc., are determined). One sheet was

numbered I and the other II because the instructor hoped to collect two sets of data at the same session: first, how much could be done in an allotted time; secondly, how long it would take to finish all the questions.

Since the instructor did not know how much time should be allotted, he asked the class for a method of settling upon a fair amount of time. It was finally agreed that once-and-a-half (or twice) the teacher's time for the test would be fair. While they timed him, he worked the problems. His time was one minute, fifty-five seconds (1:55), so three minutes was allowed them. He entered the time on the blackboard at intervals of ten seconds, and, at three minutes, said, "Change over"; after which further results were entered on sheet II.

The results are given in Table I on page 343.

Translating the results of Table I into percentages we find: in three minutes 58.7 per cent of all the questions were attempted and 42.1 per cent of all were correct; in 6:32 minutes (the average time to complete) 97.5 per cent of all the questions were attempted and 59.2 per cent of all were correct. Put in a different way—correct attempts were 71.6 per cent of those attempted in three minutes, and 60.7 per cent of those attempted in 6:32 minutes.

About two weeks later, after other tests had been given, Test H 1 was repeated as printed, with the following results:

	Time Allowed, 3:00 Minutes	Time to Finish, 3:08 Minutes
Attempts.....	8.77	9.75
Right.....	7.41	8.27
Attempts.....	87.7 per cent of whole	100.0 per cent of whole
Right.....	74.1 per cent of whole	82.7 per cent of whole
.....	84.6 per cent of attempts	82.7 per cent of attempts

The class was asked to indicate to how many and which problems answers were remembered. Except Nos. 1 and 5, with an occasional No. 4, answers were not remembered. The question was also asked whether the rearrangement was advantageous, viewing the list as a test. A very few members of the class thought that rearrangement made no difference; the great majority believed that the rearrangement was advantageous.

Evidently practice on this test, in spite of a rearrangement that made the test more difficult, showed beneficial results, not only in a marked increase in accuracy, but in a great increase in speed. During these tests absolutely no instruction was given on the subject of heat. Regular lessons on sound were recited each day. The reader can readily observe the effects of practice by consulting Table II. A test, when repeated, was given again after other tests had intervened.

Tests have also been given as follows:

Test H.2. Thermometers B. Time 4:30 minutes.

1.	Change	212° Fahrenheit to centigrade.	Answer.....	.....
2.	"	33°	"	"
3.	"	0°	"	"
4.	"	-10°	"	"
5.	"	40°	"	"
6.	"	2,000°	"	"
7.	"	10°	"	"
8.	"	-1°	"	"
9.	"	100°	"	"
10.	"	31°	"	"
11.	"	32°	"	"
12.	"	-40°	"	"
No.....	Attempts.....	Right.....	Wrong.....	.....
Time.....	Attempts.....	Right.....	Wrong.....	.....

Test H.3. Fusion. Time 2:30 minutes.

How many calories of heat are absorbed when				
1.	1 gram	of ice melts?	Answer.....	.....
2.	1,000 grams	" melt?	"	.....
3.	40 "	" "	"	.....
How many calories of heat are liberated when				
4.	1,500 grams	of water freeze?	Answer.....	.....
5.	500 "	" "	"	.....
6.	1 gram	" freezes?	"	.....
How many B.T.U. of heat are absorbed when				
7.	10 pounds	of ice melt?	Answer.....	.....
8.	1 pound	" melts?	"	.....
9.	600 pounds	" melt?	"	.....
How many B.T.U. of heat are liberated when				
10.	2,500 pounds	of water freeze?	Answer.....	.....
11.	750 "	" "	"	.....
12.	1 pound	" freezes?	"	.....
No.....	Attempts.....	Right.....	Wrong.....	.....
Time.....	Attempts.....	Right.....	Wrong.....	.....

Test H 4. Vaporization. Time 2:30 minutes.

How many calories of heat are absorbed when

- 1 gram of water vaporizes? Answer.....
- 10 grams " " vaporize? "
- 200 " " " " "

How many calories of heat are liberated when

- 1 gram of steam condenses? Answer.....
- 20 grams " " condense? "
- 300 " " " " "

How many B.T.U. of heat are absorbed when

- 1 pound of water vaporizes? Answer.....
- 40 pounds " " vaporize? "
- 3,000 " " " " "

How many B.T.U. of heat are liberated when

- 1 pound of steam condenses? Answer.....
- 50 pounds " " condense? "
- 1,000 " " " " "

No..... Attempts..... Right..... Wrong.....
Time..... Attempts..... Right..... Wrong.....

Test H 5. Specific Heat. Time 3:00 minutes.

How many calories of heat are absorbed when

- 1 gram of water (sp. ht. 1) changes 1° C.? Ans...
- 40 grams " " change 10° C.? "
- 90 grams " " " " 40° C.? "
- 1 gram " copper (sp. ht. .092) changes 1° C.? "
- 80 grams " " change 20° C.? "
- 10 grams " lead (sp. ht. .030) " 30° C.? "
- 1 gram " steam (sp. ht. .477) changes 10° C.? "
- 20 grams " " change 50° C.? "
- 1 gram " ice (sp. ht. .505) changes 60° C.? "
- 70 grams " " change 10° C.? "

No..... Attempts..... Right..... Wrong.....
Time..... Attempts..... Right..... Wrong.....

Test H 8. Heat Exchange-Simple Mixtures A. Time 7:00 minutes.

- How much water at 10° C. will be required to cool 100 grams of water at 90° C. to 60° C.? Ans.....
- What must be the temperature of 60 grams of water to warm 80 grams of water from 20° to 30° C.? Ans.....
- How much water at 30° C. will be required to warm 2,000 grams of iron (sp. ht. .109) from 15° to 25° C.? Ans.....
- What must be the temperature of 300 grams of copper (sp. ht. .092) if, when put into 200 grams of water at 20° C., the temperature rises to 25° C.? Ans.....
- How many grams of ice-cold water must be poured into a tumbler weighing 300 grams to cool it from 60° C. to 20° C. (sp. ht. glass 0.2)? Ans.....

No..... Attempts..... Right..... Wrong.....
Time..... Attempts..... Right..... Wrong.....

TABLE II
SUMMARY—TESTS H 1-5 AND 8

No. of Test	No. Tested	Title	No. of Questions	Time Allowed	Attempts	Percentage of Right	Attempts	Percentage of Right	Attempts	Percentage of Right	Attempts	Percentage of Right	Attempts	Percentage of Right	Attempts	Percentage of Right	Average Time to Complete	Percentage of Right
H 1	24	Thermometers C. to F.	10	3:00	5.87	58.7	4:21	71.6	6:32	9.75	97.5	5.93	60.7	10	10.00	100.0	8.27	82.7
H 1	22	Thermometers C. to F.	10	3:00	8.77	87.7	7.41	84.6	3:08	10.00	100.0	8.27	82.7	12	4:30	75.3	6.79	61.3
H 2	24	Thermometers F. to C.	12	4:30	9.04	75.3	6.79	74.0	6:12	11.58	96.5	8.42	82.7	12	4:30	7.86	6.50	82.7
H 2	22	Thermometers F. to C.	12	4:30	6.55	65.5	6.50	82.7	6:20	11.96	99.7	9.64	86.6	12	4:30	7.81	7.92	81.2
H 2	24	Thermometers F. to C.	12	4:30	9.75	81.2	7.92	81.2	5:08	12.00	100.0	9.50	79.6	12	4:30	6.69	5.57	58.3
H 3	23	Fusion	12	2:30	11.40	93.0	11.10	97.3	1:48	11.73	97.7	11.41	97.3	12	2:30	11.40	95.0	10.60
H 3	22	Fusion	12	2:30	11.40	95.0	10.60	92.7	2:15	12.00	100.0	11.12	92.6	12	2:30	11.00	99.2	10.10
H 3	25	Vaporization	12	2:30	11.00	99.2	10.10	84.9	2:02	12.00	100.0	10.20	85.1	10	3:00	7.50	6.80	90.6
H 5	23	Specific Heat	10	3:00	7.50	75.0	3:15	100.00	3:15	100.00	100.0	9.00	90.0	12	2:30	6.69	5.83	87.1
H 8	25	Heat Exchange— Simple Mixtures	5	7:00	2.92	38.4	0.88	30.1	8:38	4.00	80.0	1.24	31.0	5	7:00	3.58	71.6	1.84
H 8	19	Heat Exchange— Simple Mixtures	5	7:00	3.58	71.6	1.84	51.3	7:37	3.94	78.8	1.94	49.3	10	3:00	7.50	6.80	90.6

In Table II results from these tests are tabulated. Starred tests were rearranged like Test H₁ before being given the second time. In Test H₂ the rearrangement slowed the test a few seconds. Repetition of the rearranged test a week later showed an increase in speed and in number done, but a slight decrease in percentile accuracy. Rearrangement of Test H₃ did not prevent a marked increase in speed as well as in percentile accuracy.

Test H₈ was given out of order to find out, if possible, whether a break in logical continuity as well as a marked increase in complexity of operations would be reflected in the result. The low values indicate either that this test is unsuitable (if so, most school examinations and all college-entrance examinations are not suited to the capacity of pupils), or else that it had not been preceded by adequate instruction and preparation.

The time allotted to each test was determined as explained for Test H₁ by doubling the teacher's time. No one of these tests should take more than fifteen or twenty minutes from the recitation period, including the time for correcting them and entering the data on a sheet like Table I, which can be prepared in advance on an ordinary sheet of cross-section paper.

The writer asks teachers the country over to co-operate with him by trying these tests under the conditions outlined above. It is hoped that a sufficient variety of schools and classes may be tested so that the tests may be *standardized* both in time and content. Possibly it may add zest to the trials if classes are asked to go against the figures given in Table II for boys in University School without, of course, telling the classes in advance the figures against which they are competing. By such a co-operative plan the preparation of satisfactorily standardized tests will be greatly hastened. In anticipation of such co-operation the name "Union Science Tests" has been adopted.

THE FAILING PUPIL IN THE HIGH SCHOOL

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A study of pupils' statistics in a certain high school showed that for the first two years approximately one out of every three pupils fails a subject; for the last two years one out of every five; and for all terms one out of every four pupils fails a subject. It is the purpose of this paper to investigate the problem presented by these facts according to the following plan:

1. To determine the percentage of those pupils who fall within the following divisions:
 - (a) Failed; (b) failed or "dropped" out of school; (c) "poor" or failed, and lastly, (d) poor, failed, or dropped.
2. To determine the cost entailed by the pupils of each of these four divisions.
3. To list the important causes of dropping out of school and of failing.
4. To investigate the means of keeping pupils in school and of eliminating the failing as far as may be practicable.

A school of approximately 1,500 pupils was considered. A semester report was used which gave the number "enrolled" in each class the number who were "belonging" at the end of the term, the number who received a grade of E (100-90), G (89-80), M (79-70), P (69-65), F (below 65), and D (those who dropped out of school).

From the total number of classes in each grade of each subject the percentage belonging to each of the foregoing divisions was calculated for English 1 according to the explanation accompanying Table I. Then taking into consideration the number of classes taught (usually five) and the salary received by each teacher, the cost of teaching each grade of each subject was ascertained. By the percentage found for each of the foregoing divisions and the cost of teaching the particular grade of the subject there was

calculated the amount of money expended for teaching each of these divisions, as in German 1, History 2, etc. Only those subjects and grades of subjects which, by the data, called for greater attention were chosen for this study. Finally, from a summary of all grades considered there was obtained the total cost of teaching these subjects, and the cost of teaching each of these four divisions of pupils.

Table I showing the method of calculation employed is given for English 1 (first semester).

TABLE I

F	F D	P F	P F D	Teacher	Salary*	Factor	Cost
				A.....	\$ 1,640	1/5	\$ 328
				B.....	1,300	1/5	260
35	93	56	114	C.....	1,800	2/5	720
264	322	264	322	D.....	1,072	1/5	214
13.25%	28.9%	21.2%	36.4%	E.....	1,500	3/5	900
\$438	\$976	\$693	\$1,158	F.....	2,180	1/5	436
				G.....	1,020	2/5	408
				Total cost for each division totals.....	\$10,512	11/35	\$3,266

* Salary \times factor equals cost.

In Table I we see that 35 pupils failed out of the 264 who were belonging at the end of the term; 93 failed or dropped out of school out of the 322 who were enrolled at the beginning of the term; 56 received a grade of poor or failed out of the 264 who were belonging at the end of the term; and 114 received a grade of poor, or failed, or dropped out of school during the term, out of the 322 enrolled at the beginning of the term. The table shows that teacher A received a salary of \$1,640 per year and taught one class, English 1, at a cost to the school of \$328, this class representing one-fifth of his teaching duties.

The ratios found in each of the divisions are expressed in percentages at the foot of the table, as, for example, 13.25 per cent. The total cost of teaching English 1, multiplied by each of these percentages, gives the corresponding cost of teaching each division of pupils of the subject.

Table II is a summary of results obtained from the various subjects considered by the method expressed in Table I. Using

TABLE II

SUBJECT	DIVISION				Cost
	(a) F	(b) F D	(c) P F	(d) P F D	
English 1.....	\$ 438	\$ 976	\$ 693	\$1,158	\$ 3,266
	2.....	346	735	714	3,928
	3.....	252	588	618	2,480
	4.....	136	307	261	1,872
	5.....	434	388	200	2,304
	6.....	162	236	205	1,576
	7.....	167	205	107	1,272
	8.....	53	119	89	1,744
Totals.....	\$1,988	\$3,554	\$3,067	\$4,708	\$18,447
German 1.....	\$ 94	\$ 373	\$ 202	\$ 457	\$ 1,328
	2.....	169	378	221	1,168
	3.....	174	237	207	820
Totals.....	\$ 437	\$ 988	\$ 630	\$1,047	\$ 3,316
Latin 1.....	\$ 218	\$ 370	\$ 341	\$ 476	\$ 1,444
	2.....	366	520	445	1,480
	3.....	316	362	492	840
	4.....	96	124	144	564
	5.....	116	135	174	420
Totals.....	\$1,112	\$1,511	\$1,596	\$1,947	\$ 4,748
Spanish 1.....	\$ 169	\$ 395	\$ 305	\$ 508	\$1,524
	2.....	231	310	318	816
Totals.....	\$ 400	\$ 705	\$ 623	\$ 893	\$ 2,340
Algebra 1.....	\$ 640	\$1,055	\$ 830	\$1,212	\$ 3,196
	2.....	626	970	840	3,382
Totals.....	\$1,266	\$2,025	\$1,670	\$2,370	\$6,578
Geometry 1.....	\$ 541	\$ 815	\$ 750	\$ 995	\$ 2,424
	2.....	290	445	358	1,768
Totals.....	\$ 831	\$1,260	\$1,108	\$1,502	\$ 4,192
Botany 1.....	\$ 320	\$ 544	\$ 430	\$ 642	\$ 2,140
Chemistry 1.....	\$ 51	\$ 193	\$ 212	\$ 336	\$ 1,168
	2.....	218	257	363	1,262
Totals.....	\$ 269	\$ 450	\$ 575	\$ 732	\$ 2,430

TABLE II—Continued

Subject	DIVISION				Cost
	(a) F	(b) F D	(c) P F	(d) P F D	
Physics 1.....	\$ 306	\$ 725	\$ 573	\$ 950	\$ 2,972
2.....	298	425	421	540	2,328
Totals.....	\$ 604	\$ 1,150	\$ 994	\$1,490	\$ 5,300
Physiology.....	\$ 494	\$ 735	\$ 655	\$ 883	\$ 3,012
History 1.....	\$ 338	\$ 492	\$ 440	\$ 585	\$ 1,968
2.....	186	295	253	375	1,552
3.....	85	169	184	260	1,116
4.....	45	86	72	101	1,212
Totals.....	\$ 654	\$1,062	\$ 949	\$1,303	\$ 5,848
Arithmetic 1.....	\$ 428	\$ 635	\$ 565	\$ 730	\$ 1,440
2.....	283	434	420	565	1,428
Totals.....	\$ 711	\$1,069	\$ 985	\$1,295	\$ 2,868
Bookkeeping 1.....	\$ 258	\$ 434	\$ 363	\$ 518	\$ 1,160
2.....	223	360	331	454	1,092
Totals.....	\$ 481	\$ 794	\$ 694	\$ 972	\$ 2,252
Stenography 1.....	\$ 395	\$ 720	\$ 570	\$ 846	\$ 1,612
2.....	151	333	217	392	1,536
3.....	47	180	94	220	960
4.....	98	188	131	218	872
Totals.....	\$ 691	\$1,421	\$1,012	\$1,676	\$4,980
Typewriting 1.....	\$ 342	\$ 574	\$ 415	\$ 630	\$ 1,344
2.....	165	369	340	514	1,272
3.....	40	95	80	130	520
4.....	103	178	171	238	684
Totals.....	\$ 650	\$1,216	\$1,006	\$1,512	\$ 3,820
Grand totals.....	\$10,908	\$18,384	\$15,992	\$22,972	\$72,266
Percentages.....	15.1	25.4	22.0	31.8	.....

as a base the cost of teaching all grades of all subjects considered, we find from Table II the cost of each division for each grade of each subject under consideration; the total expenditure for each

division of each subject (all grades); the total expenditure for each division of all subjects; and finally the percentages of expenditure for each division of all subjects. We then know the amount of money spent for the benefit of the pupils of each division, viz., (a) F, (b) F D, (c) P F, (d) P F D; and knowing the amount of money spent, we are then in position to discuss the questions: Can additional effort and study of the problem result in a saving either to the community or the pupil? Can one dollar be spent to save two?

We find by examining Table II that English 1 (first semester) cost \$3,266 for instruction. The organization for the classes, at the beginning, obtained throughout the term; therefore this amount of money is devoted to students who begin English 1, regardless of their success or of their persistence in school. Fifty-eight pupils in this subject dropped out, but since there was no reorganization the cost of teaching the 58 pupils was the same as though they had been in attendance all the term. After deducting the number of pupils dropped out from the original enrolment, 35 of those belonging failed to pass—or 13 $\frac{1}{4}$ per cent of the possible passing. Poor is a grade so low that it indicates that the pupil is dangerously near failing and is in serious need of attention. We should then include this group in a plan which shall provide assistance and inspiration to these pupils. Thus we find that 56, or 21.2 per cent, of the possible passing are in need of extra attention, and of those entering at the beginning of the term, 114 out of 322, or 36.4 per cent, are special problems of the school.

From an examination of the values found in Table II may be made the following observations:

1. Group F varies from 38 per cent in Latin 3 to 3.8 per cent in English 8, with an average of 15.1 per cent.
2. Group F D varies from 44 per cent in stenography 1 to 6 per cent in English 8, with an average of 25 per cent.
3. Group P F varies from 58 per cent in Latin 3 to 5 per cent in English 8, with an average of 22 per cent.
4. Group P F D varies from 62 per cent in Latin 3 to 8 per cent in history 4 (an eighth-term subject), with an average of 31.8 per cent.

It cannot be presumed that all the time and energy have been wasted in cases of poor and failing, for any student, no matter how unfortunate, will retain something of value which he hears and secures through his own endeavor. But from an administrative point of view it is a complete loss: for if the student continues in school, the work must be repeated and the teaching of that grade of subject must be paid for a second time. Those who repeat the subject once are costing the school twice as much as normal pupils; those who repeat the subject twice are costing the school three times as much as normal pupils, etc. In making a special case of these pupils we are not necessarily favoring the slow ones in giving them special attention, but from one point of view we are seeking to obtain a method whereby the school will not be compelled to pay two or three times the normal price for a certain result. It means then a more even distribution of school funds between the slow and the bright pupil. It is not a question of whether more money should be devoted to the backward pupil, for he is getting that already; it is a question of whether the money could be spent more effectively. And incidentally, or perhaps primarily, it may be doing more than merely saving money: it may be saving a pupil from the state of mind and the career that usually follows one whose conscience is seared into accepting failure as his usual lot.

A teacher usually teaches five classes. Therefore one-fifth of a teacher's salary may be considered as the cost of teaching one class and will hereafter be mentioned as the cost of one "class-teacher." Since the salaries of teachers vary from \$1,120 a year for lowest-rank second assistant to \$2,180 for highest-rank head assistant, the value of a class-teacher varies from \$224 to \$436. If we then divide the cost for each division by the cost per class-teacher, we find the number of class-teachers represented for the group, a number varying according to the rank of the teacher considered.

From Table II representing an expenditure of \$72,266 (cost of teaching the classes considered) we may then convert total costs for each of these divisions into class-teacher equivalents as given in Table III.

In other words, without additional cost, if this waste could be utilized, 52 to 102 class-teachers could be used for the sole purpose of improving the scholarship of pupils of division (d).

TABLE III

Cost Devoted to Each Division	Content of Each Division	Class-Teacher Equivalents of the Cost for Each Division
\$10,908.....	(a) Failing	From 25 to 49
18,384.....	(b) Failing and dropped	From 42 to 82
15,992.....	(c) Poor and failing	From 36 to 71
22,972.....	(d) Poor, failing, and dropped	From 52 to 102

CAUSES FOR FAILING AND DROPPING OUT

1. Large numbers in a school tend to submerge the individuality of the pupil, who feels of less importance than he would if numbers were smaller. He therefore loses a part of the incentive and opportunity for winning distinction and appreciation.
2. Large numbers in classes give less opportunity for personal contact between pupil and teacher or principal.
3. The discontinuity between grade-school and high-school methods prevents some from entering high school at all, and for others who do enter the adjustment to new circumstances and personalities absorbs the time and attention at a most critical period. When a pupil becomes accustomed to his new conditions he finds himself behind in his classes.
4. A poor start invites failure, and failure invites discouragement.
5. Pupils drop out of school because the money they can earn is needed for family support.
6. (a) Boys drop out of school because a job enables them to secure better clothes and to finance the proposition of keeping company with a girl friend. (b) Girls also seek jobs in order that they may more effectively satisfy the passion for self-adornment—the other half of the boy's case.
7. A pupil may drop out of school through an incompatibility with the teacher. This condition may be compared with 4 above,

a poor start and failure being very conducive to misunderstandings and general incompatibility with the teacher.

8. Pupils are found to leave school through a clear lack of understanding of what the school is trying to do for them. And a serious aspect of the situation is the fact that many parents cannot or do not help them.

9. No variation is recognized in student ability to grasp the subject, which results in a case of survival of the fittest at the pace demanded by the teacher or the class. A perfectly normal pupil can fail because the pace is too fast, and all the sociological and psychologically reflex insults of failure are heaped upon the pupil as a sequence.

10. The distance to the school may demand carfare, which the family perhaps cannot afford, especially if there is more than one high-school pupil in the family.

11. The student may demand a more practical training, such as that given in a business college or trade school.

From this listing of the causes of failing and dropping out, we may observe that there is a group *x* which consists of those who need special attention *in* the school and those who drop out. Of these there is a part *y*, which is made up of those who drop out or fail for reasons not assignable to the school. The difference (*x*—*y*) leaves a group *z*, the members of which may be helped, provided the school can reach their needs. It is the group *z* with which we are concerned. And if at a later date it is possible to examine the results of methods mentioned here or other methods which have the same object in view, the percentage saved would be calculated on *z* as a base, for that is the group that it is possible to save. Until accurate records are kept, noting the cause of failing or dropping out of school, it will be impossible for us to know the actual or relative size of this group.

CONSIDERATION OF THESE CAUSES

Causes 1 and 2.—The process of organization ought to take note of the number of pupils per class, in order that they may be made as small as possible and encouragement be given to the pupil and teacher for a closer personal relationship.

Cause 3.—The intermediate or junior high school has been brought into existence for the purpose of overcoming this difficulty. But in the absence of a junior high school every possible means should be brought to bear upon bridging the gap as completely as possible. The high-school principal and teachers may go into the grades and make known the conditions, purposes, and advantages of the upper school. A teacher or group of teachers placed in charge of these newcomers may secure and use as much personal information concerning them as possible. The record card going to the high-school principal, soon to be adopted in St. Louis, will indicate inherent weakness and power in the pupils. A little special attention to a weak student, arranged for in advance, is a difficulty forestalled and a failure overcome.

Causes 4, 5, and 6.—These can be met by a closer personal relationship. Parents, friends, and teachers assist materially in giving proper perspective to a pupil's conditions, and prevent him from doing rashly, on impulse, that which he would seriously regret on more mature reflection.

Cause 7.—Provided it is possible without sacrificing the respect of teacher or pupil and without interference with discipline, it would be more helpful in the assignment to classes if a "repeater" could be put (accidentally from the student's point of view) with a new teacher.

Causes 8 and 9.—These demand our attention when a student starts in school or when he starts a new subject. Remedies may be found in the assigning of weak students to strong teachers, and in general a recognition of the pupil's personality in the making of his program, and in special methods for the handling of slow students. It is imperative that the pupil's program shall not be machine made if we are going to attempt to serve him. For that reason information must be in the hands of the program-maker either through a direct acquaintance with the pupil or by some system of records.

For the present the only general attempt at official recognition of pupil's differences in ability is in the offering of the various courses for graduation. The increasing number and flexibility of these courses point to their increasing popularity and to the

principle that "identical opportunity is not equal opportunity"; that to meet equally the needs of all pupils there must be a variation in the kind and quantity of subject-matter. Not only is the student who possesses unusual powers of abstract thinking and reflection to receive *the* attention of the school, but in the working out of our "New Americanism" *every* pupil ought to receive help and attention according to *his* ability and *his* needs, to a degree not yet attempted.

Causes 10 and 11.—In the desire to meet the demand for a more practical training the adoption of a centrally located trade school has been found helpful. But in the centralizing of such instruction a very important factor must be taken into account—a lesson silently taught by the distinctly private trade schools. The business colleges find it to their advantage to establish many branches in different parts of the cities. If they could induce students to come to a centrally located college, a large saving to them would be made. The carfare for one attending school for a year is \$20, and in some families, especially those having more than one high-school pupil, such expense would be prohibitive. It is noteworthy that on the occasion of the opening of a new high school in a remote district the high-school attendance from that district suddenly increases. In the attempt to provide for a trade-school education, therefore, the probable loss in attendance must be borne in mind when such an offering is centralized. It is a question then of whether the largest number of pupils can be most effectively reached for highly vocational work in a centralized or scattered system.

METHODS OF ORGANIZATION

In the discussion immediately preceding, the suggestions mentioned were general in their aspect and involved administrative problems of a very profound character. Any suggestion has a better right to consideration if with it is also pointed out the fact, not only that it is possible, but that it has corresponding advantages.

The difficulties attendant on providing a program for a school numbering 1,600 or more are varied and complex. The task of writing individual programs and assigning pupils to their classes is of such magnitude (and necessity seems to demand that it be done

by more than one person in order that students shall not be kept waiting for their programs) that a choice of individuals naturally talented for the work is not often attempted. A scheme is then to be devised permitting fewer individuals to be assigned to the work of writing programs in order to secure expertness in the work. To do this, the clerical work of the experts must be reduced to a minimum and a longer time provided for the task than would be possible at the beginning or the end of the term. The school program may be printed or blue-printed from a tracing made on regular, mechanical-drawing tracing-paper. This will permit the program to be quickly placed in the hands of as many individuals as are to assist in the work. In order to assist in this connection the program should be made on one sheet, terms, courses, grades, subjects, rooms, and hours, according to the requirements of the school. The letters indicating the class should be large, in order to be quickly caught by the eye. Room number, days, and other minor specifications are to be submerged in attractiveness by being in smaller-sized letters. Every individual program is to have a number, which may also serve to indicate the pupil to whom the program belongs.

Beginning with the new students, let us have all pertinent personal information attached to the card calling for the assignment of certain studies, in order that individual characteristics may be considered when the program is made. The committee (not more than one to every 500 pupils) then assigns the pupils to classes best suited to their individual needs, in some brief manner of marking on the program which now goes to the assistants. These assistants (number not limited) may now interpret the mark in the light of the school program in their possession, filling in all the minor details such as study-halls, gymnasium, and chorus.

A wall-chart would be helpful, giving, in a separate space for each class of the school, blanks for as many as 35 program numbers and the grade blanks according to the example shown on p. 360. This illustration is for but one class, but the wall-chart is to contain one of these for each class in the school.

The pupil's program, when complete, is to go to those in charge of this wall-chart, who will then place the pupil's program number

in the proper place provided in each class space for each of the classes to which the student has been assigned. This chart, being on the wall, is to be in full view of the experts doing the work of assigning pupils to classes, and will be an aid to them in providing for the best distribution of pupils, thus minimizing or perhaps eliminating the work of equalization. The advantage of having a few responsible experts doing the assigning is quite apparent, since it is well known that where a number of people do the assigning the work of equalization is greatly magnified. The individual programs being made and the program numbers placed on the wall-chart for each student in each class, the programs go at once to the pupils, and school begins.

CHEMISTRY: 1 Hr. 3 Tu. W. Th. F.

1. 4318*	:	:	:	:	:	:	19.	:	:	:	:	:	:
2.	:	:	:	:	:	:	20.	:	:	:	:	:	:
3.	:	:	:	:	:	:	21.	:	:	:	:	:	:
4.	:	:	:	:	:	:	22.	:	:	:	:	:	:
5.	:	:	:	:	:	:	23.	:	:	:	:	:	:
6.	:	:	:	:	:	:	24.	:	:	:	:	:	:
7.	:	:	:	:	:	:	25.	:	:	:	:	:	:
8.	:	:	:	:	:	:	26.	:	:	:	:	:	:
9.	:	:	:	:	:	:	27.	:	:	:	:	:	:
10.	:	:	:	:	:	:	28.	:	:	:	:	:	:
11.	:	:	:	:	:	:	29.	:	:	:	:	:	:
12.	:	:	:	:	:	:	30.	:	:	:	:	:	:
13.	:	:	:	:	:	:	31.	:	:	:	:	:	:
14.	:	:	:	:	:	:	32.	:	:	:	:	:	:
15.	:	:	:	:	:	:	33.	:	:	:	:	:	:
16.	:	:	:	:	:	:	34.	:	:	:	:	:	:
17.	:	:	:	:	:	:	35.	:	:	:	:	:	:
18.	:	:	:	:	:	:	36.	:	:	:	:	:	:

*The first two digits indicate the advisory group number and the last the number of the pupil within the group.

At the end of the first five weeks grades come in. Now red stars are placed on the wall-chart opposite the program number of each pupil in each class in which he is failing. The condition of the school is then at a glance apparent to the principal or superintendent. Plans may now be started to give assistance wherever it seems to be most needed. At the end of the next four weeks

preliminary grades are furnished by the teachers, and definite plans are made accordingly. If mid-term reorganization is deemed advisable, then new programs are at once provided, and the new classes may start at the beginning of the eleventh week. On the chart the supervisor may learn at a glance the places in the school demanding the most attention, just as such matters are handled by large commercial houses. It will be observed that every teacher can be reasonably sure of knowing at the end of nine weeks whether a student will fail the ten weeks' work. Our experts then have one week in which to effect the reorganization of failures, so that successful pupils may be grouped in classes by themselves and failing pupils can be put in classes where they may begin the work anew.

Toward the end of the semester another report is due, and program-making now starts in advance, so that at the end the programs of the few doubtful ones only have to be made. This cuts the period of reorganization to a minimum. With school continuing up to the end of a week, it should be possible to begin work on the following Monday. For the second semester the same plan would be repeated.

The foregoing plan will call to mind many difficulties to be overcome. There may be serious doubts with regard to possibility. But it may be said that no great work really worth while was ever accomplished without some unusual effort to bring it about, and perhaps the degree of difficulty is in some respect a measure of its value.

Time is taken at the beginning and the end of each term for reorganization. Suppose it is a week, then the time lost on the year is one month. If a school costs \$130,000 for teachers, then $\frac{1}{10}$, or \$13,000 may be saved. And if a part of the time is saved, then in proportion to the time saved is the value of that part of the work.

The mid-term reorganization is possible only when there are a number of classes of the same grade of the subject, preferably the same hour. When classes are distributed throughout the day the difficulties of making new programs permitting subjects to be started again are enormous, and there are other serious objections as well, which it is not necessary to mention. Luckily, however,

there are a number of subjects in which the number of classes run as high as twelve, such as English 1, Algebra 1, etc. The twelve classes may be put into three periods of the day, four classes at each period. A reorganization between these four classes is then possible without disturbing the organization of the rest of the school. All successful pupils may then be grouped into classes 1, 2, and 3, while class 4 receives those who need to repeat the work.

When such an arrangement fails, an alternative method may be employed. As soon as a student is doing poor work he can be put in a class formally organized for the purpose of helping slow pupils in a subject. This class may come at the close of the day, so that pupils may be received from any class-period during the day. This plan seems the most promising one where classes are few in number, and where teachers and laboratories must be employed through consecutive periods of the day. By this plan the pupil is not removed from his regular class, but is given the greatest possible chance to remain in it and do his work successfully. In this plan there is a distinct advantage over repeating the subject, for it leaves the pupil in a radically different frame of mind. In the case of mid-term or term reorganization, he is told that he is now a "flunker," and the stamp of failure is upon him. In this "supervised-study" class he is told that his work is not proceeding as it should, and that with a little guidance in his efforts he can do as well as anyone. If a pupil has any real ambition it will be in evidence at once, but to tell the same pupil that he has failed and that he must step back into a lower class has a depressing effect which too often proves serious.

In the operation of this plan, where the attendance in the supervised study was optional but recommended, it was discovered that not all the pupils who needed the work were willing to receive it. Without a good reason for refusing the help the student should be listed in the group of pupils who are not in school for business and are treated accordingly.

Nothing succeeds like success. The most potent factor in the lives of all of us is the incentive of success. We like to do what we can do and do well. It therefore follows that failure is discouraging, and especially so for that pupil who is backward. When

one has been in the habit of making things yield by the force of perseverance, the attitude in the case of difficulty is to be stimulated to greater efforts for the attainment of the goal. It is not so with him who is accustomed to failure. Repeated failure is disheartening, and when failure appears in his path he greets an old acquaintance, accepting him as an object to be endured, and making the most of it. It is the formation of the habit of failure or the habit of success, and no subject in the curriculum is more important than the habit of success. The only excuse for dropping out of school should be economic or physical necessity, and an unwillingness on the part of the pupil to co-operate with the school in doing the required work.

There is also the "study-recitation plan," which provides for a lengthened period for each class, a part of the time being devoted to the preparation of the lesson with the help of the teacher, and the remainder to the recitation. Such a plan really requires a double period for each class, and therefore twice the teaching force. But even such a plan has been reported on satisfactorily, in spite of the increased cost.

If then more frequent periods of reorganization of supervised study are desirable in order to help the students along in their work, wherein can the proposition be called a paying one? In answer, let the figures previously quoted speak. Whatever can be reduced in the expense column of P F D should be placed to the credit of the work done to bring it about. If by the cost of supervised study or other device we can save a larger amount somewhere else, or do the work of the school in a more efficient manner, it is a matter of good business to do so.

CONCLUSIONS

1. Mid-term reorganization does not require an additional teaching force except as the plan may induce pupils to remain in school who would otherwise drop out (which is, of course, the end desired).

2. The supervised-study or the study-recitation plan involves a direct increase in the teaching force or increased demands on the teachers' time. The after-school or before-school supervised study

is the more economical, since the attendance on the part of the student is required only when he needs it.

3. The supervised study is psychologically correct, since it does not class the student as a failure, but encourages him to stand alone and do his own work by himself as soon as he is able.

4. Reorganization is a subject which demands attention at certain intervals. It is then a question of how often it is advisable in the particular school—yearly, semiannually, or quarterly. The character of the classes and the possibilities of differentiation are paramount factors in making the decision.

5. More frequent reorganization, supervised-study, or study-recitation schemes may be operated entirely independent of each other.

6. In a large school the keeping of students' history cards is most indispensable, as it is impossible for each case to be personally known to the one whose task it is to "pass" upon the pupil.

In all work of this character the need of data from which to judge and make observations is very great. A manufacturer finds it to his advantage to make a record of each article which passes through the factory, and to study those records which form the basis for future action. How often is the information lacking in regard to why John Jones left school. John ceases to be a customer and we make no attempt to study the cause. Would a business man permit a customer to be dropped without some real reason for letting him go? Furthermore, would he not seek out a method of modifying his article to meet the demand in a most thorough-going, scientific manner?

EDUCATIONAL NEWS AND EDITORIAL COMMENT

AN OMISSION

In last month's issue we printed with permission "The Candle of Efficiency in Schoolhouse Planning," copyright 1918 by Frank Irving Cooper. Inadvertently we omitted to state that the Committee on Standardization of School Buildings is appointed by the National Education Association, Department of School Administration.

A STEP TOWARD THE NEW NATIONALISM IN EDUCATION

The last week in March saw a most interesting experiment undertaken under the auspices of the National Security League. The experiment was an exchange of educational ideas and sentiment between New York and Chicago. Six distinguished New York men well versed in school affairs visited Chicago and for a week addressed the teachers of this city. At the same time a corresponding representation of Chicago's educational interests performed a like service in New York. The aim was frankly an exchange of ideas affecting the teaching of nationalism and internationalism. And these ideas were lodged in the right place, in the minds of the rank and file of the teachers.

Dr. R. E. McElroy, educational director of the National Security League, has stated the purpose of the exchange, which is only one of many movements looking to national unity and solidarity, looking away from indiscriminate state action, in education.

We cannot have provincialism longer in the schools. We have a New York board of education that thinks in the terms of New York and a Chicago board of education that thinks in the terms of Chicago. We take no cognizance of the country outside, and not a city up to this time has taken a step or appropriated a penny to get its education from outside its own city, to try to make it as broad as the nation.

It has become very plain that we cannot act as a nation unless we think as a nation, and that is the object of this movement on the part of the National Security League.

FRENCH GIRLS IN AMERICAN COLLEGES

The Association of American Colleges announces a plan to bring one hundred French girls to the United States for collegiate education. The secretary of that organization says: "It is the intention of this Association to send annually to French and English universities a number of your men and women and in return to educate as many from these countries. It virtually will be a cultivation of international democracy and means the death of what insidious Germanism remains in the United States."

Letters sent by Dr. Kelly to colleges throughout the land asking if they would give free tuition and board to the one hundred French girls have been answered affirmatively by thirty-five, and many others are expected to acquiesce. Among those which have subscribed to the plan are Northwestern University; James Millikin, Decatur, Illinois; Bryn Mawr, Bryn Mawr, Pennsylvania; Wellesley, Wellesley, Massachusetts; Earlham, Richmond, Indiana; Goucher, Baltimore, Maryland; Smith, Northampton, Massachusetts; Macalester, St. Paul, Minnesota; Wells, Aurora, New York; Mount Holyoke, South Hadley, Massachusetts; and the University of Buffalo.

"A woman soon will be selected," declared Dr. Kelly, "to go to France to choose the one hundred girls, each of whom must speak English. It is expected the government of France will pay the fares and fees of those who are needy."

The cost for each of the girls, it was said, will be \$500 yearly.

MILITARY TRAINING

Acting Superintendent Straubenmiller, of the New York City schools, reports that military training is being sadly neglected. Only four high schools have an average attendance of 50 per cent of the boys enrolled for the training. Attendance of various schools ranges from 2 to 89 per cent. One report shows that of 10,898 boys enrolled for drill, 4,489 were present, 3,575 absent; the rest may have been wounded or missing. The training is said to be unpopular because it is exclusively close-order drill, including the manual of arms, and because there is no school credit awarded. Quite obviously attendance is not compulsory.

Apparently the sensible suggestion is being advanced that the work be extended to include signaling, setting-up exercises, first aid, sham battles, and the like. The boys might well be allowed to dig trenches

and perform the actual duties of modern war. But the cause for failure and lack of interest goes far deeper. Our boys are not being disciplined. We do not require them to fulfil functions of useful citizens, either for peace or for war. Compulsory attendance at military drill for all able-bodied young men of high-school age—let us have it by all means. And as for school credit—that is beside the point. It may be that the nation needs to cajole her adult citizens, perhaps adults may not care to render service, or to get ready to render service without receiving a *quid pro quo*. Affairs have indeed come to a pretty pass if we are compelled to baby our young men into loyal service. The nation has decided that voluntary service must give way to universal service—this for young men over twenty-one. And yet the schools adopt a half-hearted and ridiculously inadequate training for youth under twenty-one.

Discipline! We may be compelled to sugar-coat their studies for Young America! But alas, if we feel constrained to sugar-coat preparation for war in these days of anxiety!

TEACHERS AND GOVERNMENT WAR JOBS

The necessities of war, opening up thousands of new clerical positions at Washington and elsewhere, have drawn a great many teachers into government service. There is still a strong movement to further this exodus from the teaching profession into government work. *School Home and Education* advises all teachers, both men and women, to try the government examination soon to be held throughout the entire country. The positions will pay from \$1,200 to \$1,500, and offer short hours and annual vacations.

The great lack of elementary-school teachers throughout the country for the coming year raises a serious question as to the advisability of encouraging further loss in teachers until adequate provisions have been made to increase the supply.

NATIONAL NEED FOR MEN TRAINED IN AGRICULTURE

The demand for agricultural teachers in secondary schools, normal schools, and colleges to do extension and research work for the government is so great that the supply cannot possibly meet it. Mr. James, of the University of Illinois, says:

It is the plan of the Department of Agriculture to put at least one man in every one of the 7,000 counties in the United States. Iowa has already placed

an agent in each of her 100 counties. Wisconsin has found men for 54 out of 71 counties. Minnesota, once well provided, lost 50 per cent of her staff through enlistment and calls to county agent positions. Graduates or undergraduates in agriculture with or without training in teaching are in demand for instructional work.

MOTION PICTURES FOR SCHOOL USE

For some time motion pictures have been used in schools for the purpose of illustrating various industries and geographical features. These films were sometimes brought into the schoolroom or observed, under the teacher's direction, at public theaters. At present there is a movement to make use of the better class of motion-picture dramas that are screened in the various theaters in connection with the work in English, romance, and history. Under the title: "Better Films Committee" in *School Home and Education* we find in the list given the following companies and films recommended:

Paramount Film Co.: *Cinderella* (Mary Pickford); *The Little Princess*

American Mutual Film Co.: *Her Country's Call; Miss Jackie of the Army*

Metro: *Draft 257* (everyone should see this)

Pathé: *In the Wake of the Huns; Glacier National Park*

Vitagraph: *The Light at Dusk* (especially recommended for church use for the adult); *Bobby, the Boy Scout*

Kleine: *Skinner's Dress Suit*

Among the films recommended for use in high schools directly are: *The Tale of Two Cities, Silas Marner, Oliver Twist, Enoch Arden, Vicar of Wakefield, King Lear, A Winter's Tale, Quo Vadis* (cut Banquet Scene), *Julius Caesar*.

MICHIGAN'S WEEK OF EDUCATIONAL MEETINGS

During the last week in March more than 2,000 of Michigan's leaders in educational thought commingled and exchanged views and plans at Ann Arbor. Beginning Monday noon the Michigan Association of School Superintendents and Board Members was held, extending over two days and two evenings. The topics considered this year were "Military Training," "Playgrounds and Recreation Activities," "Schoolhouse Building," "Vocational Education and the Smith-Hughes act," and a series of reports on investigations made by various superintendents.

Among the latter topics the question of the present and future study of German in the state excited much interest.

Tuesday morning a short-term institute for superintendents, principals, and supervisors began a three-day session. This institute is sponsored jointly by the University and the State Department of Public Instruction. It consists of lectures and conferences. It absorbs with it the first day the meetings of the Superintendents and School Board Association and is merged the third day with the work of the Michigan Schoolmasters' Club. The speakers for the present year were Professor John Dewey, of Columbia University, who dealt with education in its social relations, and Dr. Walter A. Jessup, president of the University of Iowa, whose discussions centered about education as a science.

Simultaneously with the short-term institute for administrative officers a similar institute for teachers of the classics, ancient history, and literature was held. At this institute the chief speakers were Professors C. T. Currely, of the University of Toronto, G. J. Laing, of the University of Chicago, and J. J. Winter, of the University of Michigan. The leading topics of this institute were: "Recent Discoveries in Egypt," "Roman Religion from the Monuments," and "Ancient Aegean Civilization." An interesting feature also was a Latin play in English—the *Phormio* of Terence.

Thursday the fifty-third annual meeting of the Michigan Schoolmasters' Club convened for a two-day session, and simultaneously the Michigan Academy of Science held its regular annual meeting. In addition to addresses by Professor Dewey and President Jessup, these meetings were featured by lectures by Professor Guy M. Whipple, of the University of Illinois, Mr. H. W. Wells, of Washington, D.C., Dr. Robert Griggs, of Ohio State University, Professor Alexander Smith, of Columbia University, William Wirt, of Gary, Indiana, and others. "Education of Gifted Children" (Whipple), "Our Second Line of Defense" (Wells), "Alaska" (Griggs), "Oddities of Chemistry" (Smith), "The Gary School System" (illustrated by moving pictures) (Wirt), were the leading topics presented.

COMPULSORY FORENSIC TRAINING

Superintendent Vernon L. Mangum of Macomb, Illinois, sends the *School Review* an interesting account of forensic training as conducted in his high school. After commenting on the indifferent success previously attained, Mr. Mangum says:

The weakness in the compulsory forensic training as it had been lay in the method of its administration. The following plan was evolved and is now working splendidly. The students are with scarcely an exception carrying out their part with no objection whatever, as also are the teachers. All the pupils in the six-year high school receive this training.

The 430 pupils are divided into nine literary societies, three in the senior high school and six in the junior. Each senior society has one faculty adviser, each junior society two. The advisers are selected by lot. So also is the membership of the societies, the sexes being equally distributed. Each society, with the advice of the faculty advisers, organizes and elects officers, including a program committee. The program committee, aided by the advisers, plans programs for the entire semester. These programs are duplicated in the office, posted on bulletin boards, and furnished the "forensic teachers." The forensic teachers are those whose daily program includes time for this work. There are four "forensic" periods, as shown on the accompanying schedule of classes.

The forensic teachers divide among themselves the pupils who are assigned to programs, and give the accompanying notice to the pupil. The pupil's English teacher acts as the distributing agent, giving the notice to the pupil when he comes to the English class.

FORENSIC CONFERENCE

(To the pupil: Please hand this to your Study Hall Teacher prior to the period named below)

1918

Pupil _____

Please confer with me concerning your program work at the _____

Period _____

(Day of Week and Month) _____

(Forensic Instructor) _____

Room _____

Courtesy of _____

(English Instructor) _____

The forensic teacher not only guides the pupil to good subjects and subject-matter, but also trains in delivery. The rule is that three weeks before his public appearance the pupil must have made acceptable progress in his preparation. One week prior to the program date he must have the material memorized or in such form that the final week may be devoted to drill in delivery. In case a pupil is negligent he is declared delinquent and is not permitted to attend his classes until the forensic teacher sends word to the principal that the delinquency has been removed. In this way pupils are

brought face to face with their neglect in plenty of time to preserve the integrity of the program. Thus everybody is thoroughly prepared when the program date arrives. The following delinquency form is used.

FORENSIC DELINQUENCY NOTICE

1918

To the Principal

is

delinquent until further notice.

(Forensic Instructor)

Such absences are unexcused absences, and each one earns a recitation mark of failure.

The foregoing plan has now been operating for several months and is in high favor with pupils and teachers. The secret of its marked success as compared with the very partial success of former attempts at compulsory forensic training in the high school lies in the administrative plan outlined above.

THE MONOGRAPH ON PRACTICE-TEACHING

Monograph No. VII of the Society of College Teachers of Education contains the report of a committee on practice-teaching appointed in 1915. The rapidity with which collegiate institutions are increasing facilities for apprentice-teaching is indicated by the fact that at least 32 universities and 85 colleges are giving this training in 1917, against 14 in 1907. Many other institutions are planning to institute the work. Of the 117 institutions, 57 are utilizing private high schools affiliated with departments of education, and 60 are co-operating with public high schools. However, the number of prospective teachers actually taking the work at any one time is surprisingly small. The average number of practice-teachers in 90 institutions is 20. As to the value of the training some inkling was gained by Childs, of the University of Indiana. He attempted to communicate with all of the 124 students of that university who have completed the course up to June, 1914. Of 79 replies received, 69 estimated value received as "much"; 8 as "moderate"; and 2 as "little." Reports from high-school principals comparing beginners who had had this training with inexperienced beginners make a decided showing in favor of practice-teaching.

After a careful consideration of widely varying methods of procedure in the several institutions, the committee, asserting that its report is tentative and offered largely to stimulate consideration and discussion,

presents certain resolutions, and recommends that the Society appoint a committee of ten to study the entire problem of training high-school teachers. The recommendations, many of them failing of unanimous support by the committee, are as follows:

RECOMMENDATIONS

1. That the term practice-teaching be discarded.

The word practice-teaching carries to the mind of the public the idea that pupils are being practiced upon. This idea is resented by many, and the continued use of the term is likely to stigmatize our work. At least one high-school principal has already refused to permit the word practice-teacher to be used within his school for the reasons here suggested.

2. That the term practical work (instead of practice-teaching) be accepted as the blanket expression to cover all the different stages in the classroom experience of the candidate.

3. That the following terms be construed somewhat as follows:

Practical work, to include observation, experimentation, apprentice work, supervised or directed teaching.

Observation, to define that phase of practical or laboratory work which involves purposeful study, under direction and supervision, of the work of experienced teachers.

Apprentice-teaching, to define a phase of practical work that generally precedes directed teaching, where the student is called upon to serve as an apprentice in performing with the teacher all the duties of the class hour, such as correcting papers, keeping attendance and reports, looking after health standards, making an assignment, teaching a small part of the period, securing control of the class while taking attendance.

Supervised teaching or directed teaching to define actual teaching under direction.

4. a) That one hour of practical or laboratory work per day, per semester, be regarded as a desirable unit for credit.

b) That this unit of practice should include observation, apprentice work, and directed teaching. Professor Mead suggests that each phase, observation, etc., be credited separately upon the foregoing basis.

c) That this experience be divided so as to include work in two high-school subjects, or different years in one subject, rather than to be continued with one subject and one group of pupils for the entire time.

It is considered desirable for teachers in training to become familiar with first-year and with fourth-year pupils, with elementary work in a subject (mathematics, for example), and with advanced work in the same subject.

5. That the giving of demonstration lessons be encouraged wherever possible in order that observation work may be enriched.

6. That a type of practical or laboratory work for teachers of experience be developed differing in nature from that of inexperienced teachers—this work to include:

a) Observation of demonstration lessons in order that they may have an opportunity to see the new technique of teaching with materials that meet the present demands of society.

b) Solving of problems connected with subject-matter and method.

c) Some teaching to try out experiments with subject-matter or method.

d) Supervision of the work of inexperienced teachers.

7. That both university-controlled high schools, and the public high school be used wherever possible in the training of student-teachers.

“Own” school (a) because conditions can be controlled according to standards desired by the university, (b) because demonstration lessons for observation can readily be arranged, (c) because experiments with course of study and method can be carried on. In other words, the peculiar function of a university-controlled school is that of demonstration and experimentation. It should not necessarily be a “model” school.

Public high school because conditions are such as student-teacher will have to face in actual teaching.

An “own” school adjusts environment to the student; a public school impels a student to adjust himself to his environment.

8. That supervision of student-teaching be closely controlled by university departments of education in order to insure certain definite prerequisites in the selection of student-teachers, as for example,

a) Quantity and quality of work in content subjects.

b) Quantity and quality of work in education. Courses in education to include at least educational psychology, general methods, and special method.

c) The moral status of the candidate.

d) The physical status of the candidate—and, as corollary to the foregoing, the judicious elimination of those who by reasons of health, education, or temperament are unfit for the teaching profession.

MISTAKING THE TRUE NATURE OF EXPRESSION

The teaching of oral and of written expression has so far been dominated by two quite erroneous conceptions of the nature of expression itself. Happily the idea which obtained two decades ago is obsolete, namely, that in some way power of expression would follow from verbal glibness in repeating textbook expositions of language elements. That theory is dead; learning by practice has come to stay. But today many of our composition programs are built upon the assumption that practice in expression is a matter of words to be rightly spelled or pronounced, of sentences that are to be grammatically correct, including punctuation,

of paragraphs and whole compositions which are to possess rhetorical excellence. In short, we think of expression, and hence we teach it, as a matter of formal correctness in language details. It seems almost a truism to affirm that ideas, not words, sentences, or paragraphs, are the essential elements of expression. Expression is closely bound up with thinking; it is the flow of thought; it is the act of transferring from mind to mind knowledge, interpretation, or inspiration. An adult writer or speaker in the act of expression is concerned with the order, the fluency, and the effectiveness of his ideas. His attention is to all intents free from the more or less mechanical details of language.

Say that out of a rich and varied contact with life an editorial writer desires to commend or condemn an action of organized labor. He begins by roughly blocking out in his mind or on paper the sequence in which he wishes his leading ideas to appear—a process which we may call “prevision of ideas.” Then, with all his attention focused upon his thought, he dashes off a first draft. The page produced may be, and often is, a strange conglomerate of dots and dashes and abbreviations. Three letters stand for irritatingly long words that would delay his pen. Blanks temporarily take the place of precise words that do not for the moment come. Grammatical irregularities possibly, rhetorical imperfections probably, may appear. But his thought streams ahead impatient of lagging pen or typewriting. This second process may be called “transcription of ideas.” Our editor is content to ignore details for the time being because he has the comfortable assurance that his rough draft is for his own eye alone. He knows that a third process impends, which may be called “revision of ideas.” Pen in hand he goes through his manuscript; this dash is supplied perhaps from a thesaurus; that abbreviation becomes a word; sentence M is decapitated; sentence N is stood on its head; paragraph X is eliminated or turned upside down. Carefully now, deliberately now, the writer weighs every detail, paying to his expression a scrupulous care analogous to that which he pays his person before a dinner party, grooming his ideas, as it were, to appear in good society. One part of the third process deserves special mention. In his revision of ideas a writer has a twofold purpose: first, he recognizes and rearranges primarily for rhetorical effectiveness; secondly, he carefully makes spelling, capitalization, and punctuation conform to accepted standards. Indeed it might be best to consider this last duty a fourth process to be called “proofreading.”

Our present methods of teaching composition lay greatest stress upon the subordinate part of the third process, which we have called

proofreading. We drill and drill in mechanics, with the result that pupils gain but little in accuracy, and at the same time by putting our pupils in mental terror of errors we stifle fluency. A state superintendent of schools in the Middle West commands his teachers never to allow a pupil to write a word he cannot spell. This might pass as a principle of teaching spelling. But teaching spelling, punctuation, grammar, and the like are not teaching expression.

It appears to be high time that teachers distinguish clearly in their own minds between two quite different, if closely allied, processes—expression on the one hand and mechanical accuracy on the other. It is quite possible, desirable, and necessary that composition classes retain much time for intensive drill for mechanical correctness. But sharply apart from these drill periods are to be kept the expression periods, in which stress is to be put upon the versatility, fluency, and effectiveness of ideas. Any writer or speaker, be he adult or high-school pupil, must look upon himself primarily as the servant of an idea. We try to teach expression today by compelling students to be first of all slaves of language mechanics. In other words, we put the cart before the horse in most composition classes.

COMMUNICATIONS

NATIONAL ASSOCIATION OF SECONDARY SCHOOL PRINCIPALS

For the past three or four years the secondary-school principals have been showing a class consciousness that at last took form in a national organization. With a beginning at Detroit at the meeting of the Department of Superintendence there, and later in the same year with the erection of a formal organization at Chicago, the principals of many high schools united to undertake work that has long been waiting for them. An enthusiastic meeting with some splendid addresses gave the National Association of Secondary School Principals a prominent place in the Kansas City reports, and now again at Atlantic City this national organization has proved that the group has started what promises to be very successful work.

One of the features of the meeting was the address of the president Principal Jesse B. Davis, Central High School, Grand Rapids, Michigan, who advocated a lengthened school day and school year, showing that the nation is dropping behind in the world's progress because we are devoting less time to our secondary education than are any of the great powers. The charts Mr. Davis presented were at once taken by the government for distribution to the schools of the country.

Principal H. E. Brown, of New Trier Township High School, Kenilworth, Illinois, suggested a survey of colleges and universities to determine their fitness to receive graduates of high schools, and recommended a freer commerce between high schools and colleges.

Those interested in physical training in high schools will find many unique suggestions in the report by Principal W. A. Bailey, of Kansas City, Kansas. Principal Paul C. Stetson, South High School, Grand Rapids, Michigan, and J. Stanley Brown, Joliet Township High School, Joliet, Illinois, gave interesting reports on the junior high school and the junior college, respectively. Principal E. J. Eaton, North High School, Des Moines, Iowa, made a preliminary report on social organization in high schools. The meeting gave positive evidence that it has an organization for constructive work.

The first *Yearbook* of the National Association of Secondary School Principals will come from the press in a very short time. It contains a

brief history of the formation of the organization, the proceedings of the first meeting at Kansas City last February, the papers given at that meeting, and a copy of the constitution. Among the more important papers are: "The High-School Principal as Manager" by Dr. Charles H. Judd, of the University of Chicago, and "The High-School Principal's Place in Reorganizing Objectives of High-School Education" by Dr. David Snedden, of Columbia University.

It is the hope of the officers of the Association that high-school principals and head masters throughout the country will join the Association. Annual membership including the *Yearbook*, \$2.00. Remit to H. V. Church, J. Sterling Morton High School, Cicero, Illinois.

H. V. CHURCH, *Secretary*

MEETING OF THE SOCIETY OF COLLEGE TEACHERS OF EDUCATION
ATLANTIC CITY, FEBRUARY 25-26, 1918

The sessions of the Society were held at the Marlboro-Blenheim Hotel, Park Avenue Hall, Monday forenoon and afternoon and Tuesday forenoon. The Hall would accommodate only three hundred people, so that the room was crowded and people were being turned away constantly. The Secretary promises adequate quarters next year.

The work of the Society is of great interest to all members of the mid-winter section of the National Education Association; and the Society is now generally looked upon as *furnishing the program* for Monday forenoon and afternoon and also Tuesday forenoon of the National Education Association week.

The three sessions of the Society dealt with the following topics: "The Training of Principals and Superintendents"; "The Smith-Hughes Bill and Its Administration"; "Report of Special Committee on Practice Teaching for Secondary Teachers."

The discussions of the first subject led to the appointment of a special committee for the further study of the question. The discussions of the Smith-Hughes bill showed that the bill was gradually being understood and its purposes more fully appreciated. The work of the Committee on Practice Teaching, coupled with its former work, is gradually evolving definite standards for practice teaching in connection with the training of secondary teachers. The previous report of the committee is now available in *Bulletin No. 29, 1917*, of the United States Bureau of

Education. The work of the committee for the present year will in time be made available in published form.

BUSINESS MEETING

The following were the most important matters taken up in the business session:

The plan of the Executive Committee to reorganize the committees of the Society on a working basis, attaching, so far as possible, each member of the Society to one of the committees, received general approval. Each member of the Society was urged (and has since been urged in a letter sent to each member) to indicate the line of committee work in which he is most interested. The committees of the Society as constituted at present are the following:

1. Uniform Nomenclature in Education
2. Organizing (possibly standardizing) College Courses in Education
3. Professional Curricula for Different Types of Teachers
4. Standards for Departments, Schools, and Colleges of Education
5. Uniform Plan of Issuing State Certificates to College Graduates
6. Practice Teaching for Future Secondary Teachers
7. National Organization of Placing Bureaus of Colleges and Universities

Each member of the Society who has not indicated the line of committee work in which he is interested should write to the Secretary of the Society, indicating his preference.

The Nominating Committee, consisting of W. G. Chambers, W. W. Charters, and H. O. Rugg, recommended the following as officers of the Society for the coming year: President, W. C. Bagley, Teachers College; Member of the Executive Committee, H. W. Holmes, Harvard University; Secretary-Treasurer, G. M. Wilson, Iowa State College. The report of the committee was adopted.

The Auditing Committee, consisting of W. S. Sutton, E. L. Holton, and H. H. Foster, approved the report of the Treasurer. The following is a summary of the Treasurer's report:

RECEIPTS

Carried forward from 1917.....	\$272.79
Dues for 1917, 31 at \$1.00 each.....	31.00
Dues for 1918, 189 at \$2.00 each.....	378.00
Sale of separates, 1917.....	17.25
 Total.....	 \$699.04

EXPENDITURES

E. E. Rall, committee expense, 1917.....	\$ 2.65
W. G. Charters, committee expense, 1917.....	14.64
Hollister separate, Public School Publishing Co.....	8.00
Alexander separate, University of Chicago Press.....	3.70
1918 programs, Times Publishing Co.....	20.00
A. R. Mead, committee expense, 1918.....	23.65
Stamps, stencils, mailing separates, correspondence, 1918.....	41.74
Stenographic help, 1918.....	10.00
 Total expenditures.....	 \$124.38
Balance forward, 1918.....	 574.66
	 \$699.04

The Resolutions Committee, consisting of F. P. Graves, F. J. Kelly, and H. A. Hollister, reported the following resolutions which were adopted by the Society:

1. We favor a larger concentration of Education in matters relating to national security, and hold that this is not inconsistent with the ideals of democracy.
2. We favor the establishment of one central agency at Washington, which shall study carefully the economical and efficient use of educational facilities and the work that can be done by educators, and shall serve as a clearing-house for the co-ordination of educational activities throughout the country.
3. And we further favor the appointment of a representative to confer and co-operate with representatives from the National Education Association and other educational bodies, in order that such an effective co-ordinating agency may be organized.
4. We favor the establishment of a federal Department of Education, in charge of a Secretary, which shall be co-ordinate with the Departments of State, Treasury, War, and other branches of the President's cabinet.
5. We favor encouraging former teachers and others who have met the major qualifications for teaching to offer their services to the schools at this time of unusual shortage of teachers, but we hold that, while it should be the policy of certificating agencies to grant temporary certificates to such teachers as best meet the present emergency, under no circumstances should the standards required for regular certification be lowered.

A motion prevailed, instructing the Secretary-Treasurer to remit the dues of the men who have entered the government war service; and expressing, in general, the Society's appreciation of the patriotic response being made by its members.

G. M. WILSON, *Secretary*

EDUCATIONAL WRITINGS

I. COMMENT ON EDUCATIONAL WRITINGS

SYLVESTER, CHARLES H. (Editor-in-chief). *Progress of Nations*. An account of the progress of civilization prepared with the assistance of eminent educators from leading colleges and universities. 10 vols. Chicago, Kansas City: National Progress League.

This is a work comprising eight main and two supplementary volumes. Of the main volumes two are devoted to the history of antiquity, three to the history of Europe, and three to the history of America. One of the supplementary volumes is made up of what is termed a chart course. It contains a three years' course of study in outline form based on the eight main volumes. Besides the outline of three years of work in history this volume also contains a number of graphic charts, source extracts, and illustrations. The other supplementary volume is called *Graphic History*. It is made up of three parts as follows: graphic history, manual of methods, and a supplement. It would be difficult to give an adequate description of the graphic history, which relates to the United States. One must really see the illustrations to appreciate them. A mere enumeration of some of the subjects illustrated will give some notion of this part of the work: modes of travel, habitations, slavery in the United States, the Panama Canal, acquisition of territory, political parties, each administration, the Civil War, the Revolutionary War, and each of the thirteen colonies.

The part of this volume devoted to methods contains 126 pages. The discussion relates especially to United States history and was written by Professor A. H. Sanford, of La Crosse, Wisconsin. Such topics as purposes in teaching history, the use of the textbook, the use of outlines and reviews, the use of supplementary reading, teaching cause and effect, and many others of a similar nature are discussed at some length. This and the foregoing section would be of much interest to grammar-grade and junior high school teachers of history. Part III, or the Supplement, of this volume contains material relating to the administration of Woodrow Wilson, Mexico since 1867, and the war of the nations—all of which give evidence of the up to dateness of the entire work.

Regarding the general plan of the eight main volumes on the history of antiquity, of Europe, and of America it should be said that the account is in narrative form, the end sought being to present a narration of events that would be interesting and instructive to the general reader. The style is clear

and attractive, and the narration is interspersed with interesting anecdotes and descriptions. The material in each volume has been selected with much care, emphasis being given to those movements in the past that have contributed in the largest measure to the progress of civilization. Art, literature, and industries receive relatively more attention than military campaigns or battles. Since the work was reviewed by eminent historians in the various fields treated, before it was published, its authenticity will not be seriously questioned.

Among the special features of the work are the illustrations and maps. There are in all thirty-two illustrations in color, representing the world's greatest paintings. Half-tones, etchings, and photographs are scattered liberally through the volumes. With the aid of these illustrations the reader will be able to reconstruct in his imagination each age as it really was. There are a number of colored maps inserted here and there wherever they will be of assistance to the reader. Besides these there are many etchings containing plans of cities, buildings, and battlefields.

The work contains other features which one might designate as study or pedagogical aids. These consist of suggestions to the reader at the beginning of certain chapters, suggestive questions at the end of each chapter, lists of authentic works, chronological summaries, and lists of dates to be remembered.

The subtitle of the work is *Practical History of the World*. It will require but a cursory examination by the reader to see the justification of this subtitle. The truth of the matter is that if one should desire a self-directed reading-course in the history of the world one could do nothing better than take up each volume in order and follow the direction contained therein. Furthermore, if one should desire to pursue a three years' course in the history of the world one would do well to follow the outline given in one of the supplementary volumes using the various main volumes to secure the information called for in the outline.

In conclusion, the writer sees no reason why the work would not be of much value as reference material in regular courses in history. The narration of the world's history contained in the eight main volumes is something that history students could pursue with profit, for it too frequently occurs that students pursue the study of history for two or three years without ever securing a connected narration of the history they have been studying. The writer is almost radical enough to say that if the cost did not prohibit such a plan, he would favor the use of such a series as the present one as a text in high-school history.

Seventeenth Yearbook of the National Society for the Study of Education. Parts I and II. Bloomington, Ill.: Public School Publishing Co., 1918.

Part I of the *Seventeenth Yearbook* is the 1918 report of the Committee of the Department of Superintendence of the National Education Association on Economy of Time in Education. The report is made up of a section on studies of minimum essentials in elementary-school subjects and one on a symposium

on the purposes of historical instruction in the seventh and eighth grades. A number of educators contributed to the first section. In it one finds reports of studies on arithmetic, geography, reading, composition, civics, and history. In most cases these discussions read like hurriedly written term reports which too often characterize one phase of graduate work in education. As a rule the studies are brief and devoted to a particular phase of the subject under investigation. In some cases the work is scientific, in others it is not. As a whole the reader is not impressed with the methods employed or the conclusion reached. No constructive program is proposed in this section of the volume.

Section II of the report furnishes some evidence of the wide divergence of opinion at the present time on the purposes of historical instruction in the seventh and eighth grades. Professor Bagley, who had general charge of the symposium herein reported, asked a number of people to write a brief statement of the aims of historical instruction in the seventh and eighth grades. Seven individuals complied with his request as follows: two professors of history, one of sociology, one of social and political science, one of government, one of education, and one who wished his name withheld. As is too often the case in discussions of this type, the writers wander far from the subject under consideration. One talks about the requisites of a good text in history, another about the qualification of teachers, and another about the value of this or that social science other than history. One is far from knowing the value of historical instruction in the seventh and eighth grades when one has read the symposium throughout.

Part II of the *Yearbook* is devoted to the subject, *The Measurement of Educational Products*. Representatives of the National Association of Directors of Educational Research were the chief contributors to the volume. Among other things it contains "History and Present Status of Educational Measurements" by Leonard P. Ayers; "The Nature, Purposes, and General Methods of Measurements of Educational Products" by Edward L. Thorndike; "Training Courses in Educational Measurement" by S. A. Courtis; and "A Look Forward" by Charles H. Judd. The volume closes with "A Selected Bibliography of Certain Phases of Educational Measurement" by Edna Bryner, of the Russell Sage Foundation, New York City. This bibliography contains 606 items. It will, no doubt, come to be the most valuable feature of the volume as a whole.

HART, A. B. *New American History*. Chicago: American Book Co., 1917.
Pp. viii+650.

In his *New American History* Professor Hart has centered his discussion around the following large topics: "Beginnings," two chapters; "Colonization," five chapters; "Revolution and the Constitution," three chapters; the "Federal Union," five chapters; "National Spirit," three chapters; "Sectionalism," five chapters; "Civil War," four chapters; "Reorganization," four

chapters; and the "World Power," six chapters. That such a general organization is the best possible one for teaching purposes is questionable. "Beginnings" is too indefinite, "Civil War" is not co-ordinate with "Sectionalism," and "Reorganization" might better be applied to the first twenty-five years of the nineteenth century than to the last twenty-five.

In his few words to the teacher in the opening pages the author enumerates thirteen features of his book which he feels to be the most important for the pupil and the most helpful to the teacher in using the text as a foundation for studying or teaching it. This enumeration will certainly be a useful guide to the users of the book. In concluding his words to the teacher the author sums up what he has tried to do as follows: "I have, at least, tried to write about the things that count; to describe events which have aided to make us Americans; to set before my young countrymen the ideal of true national greatness."

The book is strong in pedagogical aids and devices. The chapters are divided into sections numbered consecutively throughout the book. There are many good maps, both colored and sketch. The illustrations are well selected. At the end of each chapter there is a long list of references bearing on the text and topics, illustrative material, topics answerable from the list of references given, and topics for further search.

Some new tendencies in the teaching of American history in the high school are found in the book. Due attention is given to the period since the Civil War, and industrial and social life receive considerable consideration. On the whole, however, the book is much like at least fourteen other ones in the same field. A really new American history for high-school Seniors yet remains to be written.

EVERETT, WALTER GOODNOW. *Moral Values. A Study of the Principles of Conduct.* New York: Henry Holt & Co., 1918. \$2.75 net.

A casual glance through the Table of Contents of Professor Everett's *Moral Values* reveals the fact that it contains an account of practically all the prominent historical ethical doctrines and takes up practically all the important ethical problems. A trained observer would gather further that the author's conception of morality is that it is the rational organization of the conflicting desires and interests which make up life into an orderly scheme of "values," and that the logical center of the book about which all the rest is grouped is the discussion of the different sorts of values which compose that scheme. He might therefore conclude, on the analogy of by far the greater part of our philosophical literature, that the book is both difficult and dull.

The actual reading of one chapter, however, would suffice to reverse this decision. Professor Everett has a remarkable faculty for bringing out the human significance of even the most abstruse ethical theory. Moreover, his own notion of the moral problem leads him into a discussion of human living

rather than of the psychology of the judging process. It is this quality of profound and genial insight into human character which, coupled with his mature scholarship, makes Professor Everett's book especially valuable for the general reader, particularly for high-school teachers, and even for the older students.

A brief quotation will serve to show that *Moral Values* bears a close logical relationship to the ethics of *Creative Intelligence*, though its author does not count himself a pragmatist.

In the polity of the soul we may picture reason as judge. It sits above the pressing throng of impulses and desires which, reckless of other interests, plead only their own special causes. As impartial arbiter it refuses to allow the lesser interests to prevail over the greater, or the greater wholly to over-ride the lesser. Rebuking the elements of discord in the soul, it seeks to secure an increasing harmony of interests and to establish ever more widely a true kingdom of values. . . .

Society is mankind, and mankind is living, creative energy, the most marvelous and fascinating force of which we have knowledge. The great minds of the past pictured the corporate life of humanity as finding embodiment at last in some ultimate ideal, some Utopia, or City of God. But we have learned that such a structure can never take final and unchanging form. It is always in the building, for its materials are not fixed and inert, like those of the architect, but are none other than pulsing, eager lives, which forever create, and forever re-fashion their own creations.

The stylistic grace of these paragraphs is a perfectly fair indication of the extremely readable character of the whole book.

C. E. AYRES

UNIVERSITY OF CHICAGO

TUFTS, JAMES H. *Our Democracy: Its Origins and Its Tasks*. New York: Henry Holt & Co., 1917. Pp. vi+322.

—. *The Real Business of Living*. New York: Henry Holt & Co., 1918. Pp. vii+468.

Both of these books were written to "show the origins of our institutions and standards, of our business and political ideals" in order to provide for younger readers such a collection of material from the fields of history, sociology and politics as will give a better understanding and appreciation of our democracy and its problems. The wholesome idealism of these books is well calculated to "point out the tasks in responsibility, public spirit, fair dealing, and the further development of liberty, co-operation, and democracy."

The Real Business of Living is made up of four parts. Part I, "The Beginnings of Co-operation, Order, and Liberty," traces this development from the early life of man, through the clan, the warrior group, the king, and the state, trade and town life, and the middle class. In each step is shown the necessity for greater co-operation, and the growth of liberty, the ideals of honesty, and the dignity of labor.

Part II, "Problems of Co-operation and Right in Business," begins with the Industrial Revolution. Then follow the economic and sociological results, such as the growth of corporations, the wage system, increase in wealth, etc. Out of this grows the discussion of business and civic morals, e.g., "Good Faith and Responsibility," "Work as Public Service," "Fair Price," "Control of Private Business," etc.

Part III, "City and Country," is devoted to a rather brief statement of the growth of cities and the problems resulting from the concentration of population, together with a sketch of urban agencies for the welfare of the citizens. The modern city as a product of the Industrial Revolution is made clear. A short discussion of the disadvantages, advantages, needs, and problems of country life closes this part.

Part IV, "Liberty, Union, Democracy in the New World," opens with a chapter on American conditions and the Industrial Revolution as influences determining our problems and ideals. The important conditions given are (1) the kind or class of people coming to America, (2) free land, and (3) the frontier. Then follows material, largely historical, showing the development of our liberty and union. In the chapter on "Present Problems of Union" are given the race problem and the problem of capital and labor. Other problems and the ideals of democracy are discussed in the chapters on "Democracy as Self-Government," "The Obstacles to Self-Government," "Democracy as Equality," and "The Progress and Task of Democracy." In these chapters are found fair discussions of the suffrage question, organized labor, and equality in business. The book closes with two chapters on the international aspects of democracy: "The United States and Other Nations" and "War and Right."

Our Democracy: Its Origins and Its Tasks contains the same material as Parts I and IV, of *The Real Business of Living*, the latter part having additional chapters on the development of union, parties, and the presidency, and democracy and the courts.

The value of both of these books lies in their presenting in language readily understood by upper-grade high-school students something that books on citizenship thus far have not done, namely, a historical, sociological, and economic background for our present-day problems and ideals. This will give the student a clearer, broader, and more intelligent understanding and power of interpreting our complex democracy.

Their use as texts is somewhat limited by two factors: (1) the condensation and general nature attendant upon covering a variety of fields, and (2) the lack of references to supply further illustrative material for the teacher and student. The first deficiency is to some extent minimized by the free use of short examples and by the simplicity of the language. A good feature is the use of questions or problems in the body of the text to introduce discussions. There are marginal head notes. The books are without illustrations.

The soundness of viewpoint, the suggestive value of the material, and the clarity of statement justify the use of either book (but preferably *The Real Business of Living*) in upper high-school social-studies classes.

ARNOLD LAU

Student In Education, University of Chicago

CLIPPINGER, E. E. *Written and Spoken English*. Chicago: Silver, Burdett & Co., 1917. Pp. xii+561.¹

The present volume stands in marked contrast to formal treatment of composition and rhetoric. Rather than a minute analysis of the elements of composition, followed by an isolated discussion of principles, this text emphasizes the use of the various elements and the application of the principles.

The book is prepared from the pupil's standpoint rather than from the teacher's. In fact, assignments are so complete and helpful that the pupil can work them out for himself without the teacher's aid. It is generally conceded that the best method of teaching composition, provided the teacher is an expert, is by requiring much practice in theme-writing and giving personal criticism. In the hands of a poor teacher or one of limited specialized knowledge in English this same method is most commonly abused.

It seems that the author has, in the form of a textbook, tried to accomplish the same end that a skilful teacher accomplishes by frequent and informal criticism. The scheme is to make a definite assignment, indicating how it may be attacked; then to give an example of a theme written upon the same or a similar assignment; then with the concrete example before the reader the author proceeds to give practical suggestions as to how the theme may be improved. The effect is that of a personal interview with the instructor with a concrete case in mind. Although the suggestions fit the particular case, they are general enough to fit the pupil's probable needs.

This is the only text wherein the writer has seen this effect repeatedly and consistently produced. It is certainly an advanced step in textbook-making as respects practical work in composition.

In Part III something like forty pages of condensed rules in grammar and diction are given as an aid to pupils in correcting their own themes. These rules are given a number and a descriptive term by which the teacher may refer the pupil to them. The reviewer is inclined to think that the plan of requiring the teacher to keep 95 key words in mind is rather elaborate, yet the idea of submitting a large number of practical rules governing the better forms of grammar and diction is of inestimable value to the teacher of limited resources. A close application of the method suggested will increase the average teacher's

¹This and the remaining reviews were contributed by L. V. Cairns, Fellow in Education, School of Education, University of Chicago.

ability materially. It is one of the marked weaknesses of even special teachers of English that they are limited in the ready application of a well-worded, practical rule to fit the commonest of errors. A ready reference to, and frequent repetition of, these rules will do much to give pupils a knowledge of composition.

The book should be welcomed by all faithful and earnest teachers seeking a thorough treatment of the vital thing in composition—learning to use the English language correctly.

LYON, D. O. *Memory and the Learning Process*. Baltimore: Warwick & York, Inc., 1917. Pp. 179.

This volume of nearly two hundred pages constitutes one of the most exhaustive treatments of memory that we have in experimental education. The experiments began in 1906 and have been carried on since that time. From time to time brief abstracts of the work have been published under the title "The Relation of Learning to Retentiveness." In 1908 experiments were started on "The Relation of Length of Material to Time Taken for Learning." Two methods, or distributions of time, were used, and thus there was added an extra problem which the author terms "Optimum Distribution of Time." The results of these experiments have been published in the *Journal of Educational Psychology*, Vol. V, Nos. 1, 2, and 3.

Chapters i and ii, dealing with "Forms of Mental Activity Included under Memory" and "Sub-divisions of Memory with Reference to Their Relations to the Learning Process," constitute a somewhat technical analysis of memory. Chapters iii and iv are confined to the examination of data obtained by experiment.

The technical details of the devices used can be of little interest to any but the student of experimental psychology, but the results obtained are of general interest to educators. Consequently chapter v, dealing with "The Educational Value of Psychological Research," is about the only part of the book that will be of interest in its entirety to the ordinary public. But all special students of experimental psychology and particularly those who have done some work in memory will prize very highly the vast amount of experimenting that Mr. Lyon has done and the scientific manner in which he has handled his results.

OPDVCKE, J. B., AND DREW, CELIA A. *Commercial Letters*. New York: Henry Holt & Co., 1918, Pp. viii+395.

The aim of this book as stated in the Preface is to "present good examples of the principal types of the commercial letter, from the simplest and most obvious to the most complicated, most scientific, most artistic."

The reputation of the authors guarantees that these letters have been selected with untiring diligence and discriminating judgment. They have

obtained access to a great amount of correspondence and have selected letters which have actually proved their effectiveness.

The letters are grouped and discussed under the following heads: (1) application; (2) reference, recommendation, and introduction; (3) order and acknowledgment; (4) claim and adjustment; (5) inquiry and information; (6) collection; (7) sales and follow-up letters; (8) form and circular letters; (9) announcements; notices, resolutions. The Appendix contains forms of telegrams, cablegrams, and filing.

As the Table of Contents suggests, the book is intended for use in both the business office and the schoolroom. It has the virtue of not imposing upon its readers the authors' views of what constitutes a good business letter. In fact, one wishes at times that the authors had expressed themselves more freely in discussions as to points in particular letters. It is surely a desirable book for models, and will find a practical place as a reference book in business offices and schoolrooms.

Educational Psychology Monographs. Baltimore: Warwick & York, Inc.

Three such monographs have been sent to the *School Review* this month. The first is entitled *The Stanford Revision and Extension of the Binet-Simon Scale for Measuring Intelligence*. It represents the work of Professor Terman and a group of collaborators. It summarizes the data on which the Stanford revision and extension of the Binet scale rests, and gives an analysis of the results secured by the application of the revised scale with nearly 1,000 unselected school children. It is a companion volume to *The Measurement of Intelligence* (Houghton Mifflin Co., 1916), which tells how the tests are scored and the results interpreted. The present volume deals with the following topics: "The Distribution of Intelligence," "The Rate of Growth and the Validity of the Intelligence Quotient," "Sex Differences," "Relation of Intelligence to Social Status," "Relation of Intelligence to School Success," "The Validity of the Individual Tests," etc. The material is so arranged as to make the monograph very usable. There are brief, clearly stated summaries at the close of each chapter. At the close of the book is a discussion of the Yerkes Point Scales.

The second monograph is *The Picture Completion Test*. It is the work of Rudolf Pintner and Margaret M. Anderson. The authors have prepared the book in response to the demand for the standardization of a procedure and a standard method of evaluating results. They have made Healy's Picture Completion Test the basis of their study. The standardization is based on the results of over 1,500 cases. By means of the reaction of subjects they have established norms for different ages. The results indicate that the test discriminates well between the ability of children at various ages. In addition to its general use as an intelligence test it is particularly valuable in cases where language handicaps appear on the part of subjects to be tested. The chief

contribution of these authors is their method of procedure and their treatment of the results.

The third monograph is entitled *Influence of Age and Experience on Correlations Concerned with Mental Testing*, by Edward Safford Jones, of Oberlin College, who for three years was an assistant in the Vocational Bureau of Cincinnati and is therefore competent to write with more insight than the purely objective statistician. The records of 203 Cincinnati working-boys who had been tested in four consecutive years were used. Is there a markedly closer relationship between records of intelligence on the first and second year of testing the same subjects than between similar records on the first and fourth years? Do people as a whole become more alike or wider apart in ability as they leave school? Do age and experience in industry tend to lower the correlation between tested intelligence and the amount of education completed? These are some of the questions which Dr. Jones has attempted to answer.

II. CURRENT EDUCATIONAL PUBLICATIONS RECEIVED IN MARCH, 1918

(Books marked thus (*) reviewed in this issue)

A. GENERAL EDUCATIONAL THEORY AND PRACTICE

Accredited Junior Colleges, Circular of Information. The University of Missouri Bulletin. Columbia, Mo., 1918. Pp. 182.

Arithmetic. School Document No. 22, Boston Public Schools. Boston: Boston Printing Department. 1917. Pp. 84. Bulletin No. XIII of the Department of Educational Investigation and Measurement.

DAVIS, KARY C. *School and Home Gardening.* Philadelphia and London: J. B. Lippincott Co., 1918. Pp. xvii+353.

Emergency Training in Shipbuilding. Washington: Government Printing Office, 1918. Pp. 71.

GRACE, M. ANNIE, AND MONROE, EMMA C. *Lesson Plans in Fourth-Grade History.* Baltimore: Warwick & York, Inc., 1917. Pp. 155. \$0.75.

HECKERT, J. W. *The Organization of Instruction Materials.* New York: Teachers College, Columbia University, 1917. Pp. 107. \$1.00.

JONES, EDWARD SAFFORD. *The Influence of Age and Experience on Correlations Concerned with Mental Tests.** Baltimore: Warwick & York, Inc., 1917. Pp. 89. \$1.25.

KENDALL, CALVIN NOYES. *History in the Elementary School.* Chicago: Houghton Mifflin Co., 1918. Pp. vii+134. \$0.75.

LYON, DARWIN OLIVER. *Memory and the Learning Process.** Baltimore: Warwick & York, Inc., 1917. Pp. 179.

Mechanical and Technical Training for Conscripted Men. Washington: Government Printing Office, 1918. Pp. 47.

PINTNER, RUDOLF, AND ANDERSON, MARGARET M. *The Picture Completion Test.** Baltimore: Warwick and York, Inc., 1917. Pp. 101. \$1.25.

*Seventeenth Yearbook of the National Society for the Study of Education.**
Part I: *Third Report of the Committee on Economy of Time in Education.*
Part II: *Measurement of Educational Products.* Bloomington, Ill.: Public School Publishing Co., 1918. Pp. 134 and 194.

TERMAN, LEWIS, AND OTHERS. *The Stanford Revision and Extension of the Binet-Simon Scale for Measuring Intelligence.** Baltimore: Warwick & York, Inc., 1917. Pp. 179.

Texas History Teachers' Bulletin. Austin, Tex.: University of Texas Bulletin, 1918. Pp. 77.

WILSON, H. B. *Training Pupils to Study.* Baltimore: Warwick & York, Inc., 1917. Pp. 72. \$0.50.

B. TEXTBOOKS FOR THE ELEMENTARY GRADES

BEST, SUSIE M. *Egypt and Her Neighbors.* New York: Macmillan, 1918. Pp. 185. \$0.60.

—. *Merry England.* New York: MacMillan, 1918. Pp. 185. \$0.60.

—. *Western Europe.* New York: MacMillan, 1918. Pp. 183. \$0.60.

CARPENTER, FRANK G. *Around the World with the Children.* Chicago: American Book Co., 1917. Pp. ix+133.

DAVIDSON, ISABEL. *Real Stories from Baltimore County History.* Baltimore: Warwick & York, Inc., 1917. Pp. 282.

FARMER, A. N., AND HUNTINGTON, JANET RANKIN. *Food Problems.* Chicago: Ginn & Co., 1918. Pp. 90.

HERVEY, WALTER L., AND HIX, MELVIN. *The Horace Mann Readers. Seventh Reader.* Chicago: Longmans, Green, & Co., 1918. Pp. 480. \$0.80.

MILLER, ELIZABETH ERWIN. *The Dramatization of Bible Stories.* Chicago: The University of Chicago Press, 1918. Pp. 157. \$1.00.

C. TEXTBOOKS FOR THE HIGH SCHOOL

BOLENIUS, EMMA MILLER. *Everyday English Composition.* Chicago: American Book Co., 1917. Pp. 340.

BRENKE, W. C. *Advanced Algebra.* New York: Century Co., 1917. Pp. 196. \$1.25.

—. *Elements of Trigonometry with Tables*. New York: Century Co., 1917. Pp. 39.

CLIPPINGER, ERLE E. *Written and Spoken English*.* Chicago: Silver, Burdett & Co., 1917. Pp. 561.

GOODWIN, MARY LOUISE, AND GUILLY, KATE GORDON. *Student's Handbook of Composition*. Part II. New York: Macmillan, 1918. Pp. 38. \$0.25.

GREENE, GEORGE G. *Pattern Making Note-Book*. Peoria, Ill.: The Manual Arts Press, 1917. Pp. 25. \$0.25.

HART, ALBERT BUSHNELL. *New American History*.* Chicago: American Book Co., 1917. Pp. 650.

JOSSEYARD, BETH WARNER. *Food Preparation. A Laboratory Guide and Note-Book for High-School Classes in Domestic Science*. Parts I and II. Peoria, Ill.: The Manual Arts Press, 1917. Pp. 142.

OPDYCKE, JOHN B., AND DREW, CELIA A. *Commercial Letters*.* New York: Henry Holt & Co., 1918. Pp. 395.

SMITH, HERBERT R., AND MESS, HARRY M. *The Laboratory Study of Chemistry*. New York: Henry Holt & Co., 1918. Pp. 256.

STEEVER AND FRINK. *The Cadet Manual*. Philadelphia and London: J. B. Lippincott Co., 1918. Pp. 317.

THORNDIKE, ASHLEY H. *The Elements of Rhetoric and Composition*.* New York: Century Co., 1918. Pp. 363. \$1.25.

TUFTS, JAMES H. *The Real Business of Living*.* New York: Henry Holt & Co., 1918. Pp. x+468.

—. *Our Democracy: Its Origins and Its Tasks*.* New York: Henry Holt & Co., 1917. Pp. vi+327.

D. MISCELLANEOUS PUBLICATIONS

America and Her Allies. Chapel Hill, N. C.: University of North Carolina. Pp. 9.

American Ideals in American Literature. Chapel Hill, N.C.: University of North Carolina. Pp. 11.

BUTTERFIELD, GEORGE E. *Bay County—Past and Present*. Bay City, Mich.: C. & J. Gregory, Publishers, 1918. Pp. 212.

High-School Libraries, List of Books for, etc. Madison, Wis.: Issued by C. P. Cary, State Superintendent. Pp. 209.

Los Angeles City Schools and the War. Los Angeles City School, District School Publication No. 10, 1918. Pp. 84.

National Ideals in British and American Literature. Chapel Hill, N.C.: University of North Carolina. Pp. 85.

SYLVESTER, CHARLES H. *Progress of Nations—the Practical History of the World.** Eight regular and two supplementary volumes. Chicago and Kansas City: National Progress League.

The Texas Meteor of October 1, 1917. Austin, Tex.: University of Texas. Pp. 56.

